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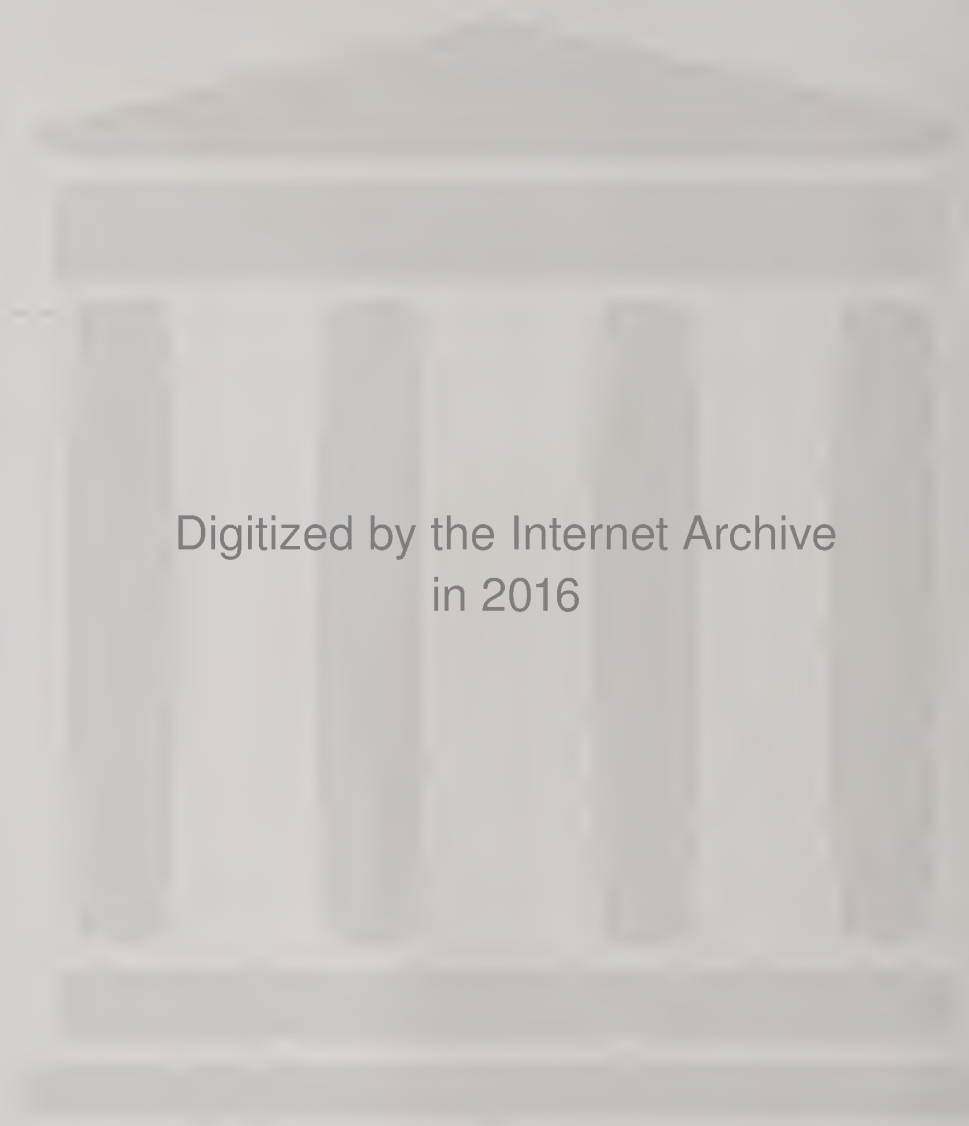
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OF THE KENTUCKY STATE MEDICAL ASSOCIATION

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VOL. 53 JANUARY, 1955 NO. 1

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WASHINGTON NEWS DIGEST

Washington, D. C.—Because this is a new Congress and under new leadership, a number of new bills can be expected in the health field.But the Democrats also can be expected to devote a vast amount of time to health legislation that was previewed last session by the Republicans

In fact, one of the more prominent bills on the list, that providing federal reinsurance of health insurance plans, was subjected to lengthy hearings before it finally met defeat in the House late in the last session. So thoroughly was it dissected then that it will be surprising if the friends of reinsurance can find anything else favorable to say about it, or its critics can find anything else wrong with it. How this Republican bill will fare in Democratic committees now is one big question.

There is always the possibility, of course, that some of the major bills to be presented again will be so amended that new decisions will be called for. For example, the administration's experts all fall have worked tirelessly to make the reinsurance bill more palatable.

Like the reinsurance bill, the proposal to revamp the procedure for distributing public health grants to states was well worked over last session. It passed the House, but the Senate committee was unable to untangle all the knots it discovered, so there was no final action. This too, is up again this year, labeled as difficult and touchy but nonpartisan.

Another well-advertised bill coming up for action is that to set up a program of contributory health insurance for federal employees. Last session a Senate committee held a one-day hearing on this bill, admittedly merely to get the proposition "on the record" so it could be freely discussed between Congresses. A task force from the Civil Service Commission has been trying to hammer out a more workable version of the bill, and has found the task a formidable one. But despite the complications, Congress will be asked to enact some bill of this type.

Although the bill definitely is of Republican origin, there is no reason to expect that it will receive a hostile reception from the Democrats in either House. It is generally accepted as a too-long delayed attempt to bring the federal government into line with private industry.

The bill for expanding medical care for military dependents has about the same history. After months of planning and conferences, bills were introduced last year in House and Senate to get the idea out into the open for the benefit of Congress and the public. Because the plan is so highly controversial, however, no hearings were held last session. The same bill is going before Congress again.

Here the fundamental issue is whether military hospitals and uniformed physicians shall supply the preponderance of this service to dependents, or the dependents shall be treated largely by civilian physicians and in civilian hospitals.

Last session the Defense Department prepared the draft of a bill to set up a number of military medical scholarships. Because bills originating in one department that might affect another first must be submitted to the latter for comment, this bill was turned over to Mrs. Hobby's Department of Health, Education, and Welfare. There it rested until after Congress adjourned. The 84th Congress will be asked to enact the bill, possibly as an alternative to extending the Doctor Draft, which is scheduled to expire next July 1.

Efforts will be made, but not necessarily with the Eisenhower administration's help, to enact some sort of legislation for federal guarantee of hospital mortgage loans. This subject was gone into in great detail last session by Mr. Wolverton's House Interstate and Foreign Commerce Committee, but the committee finally turned down Mr. Wolverton and refused to report out the bill for action. It had widespread labor support last year, but was opposed by the AMA as discriminatory, in that it would offer more assistance to closed-panel practice than to other forms of medical practice.

Indications are that Mrs. Hobby's department will sponsor legislation to aid medical schools, a subject that was not taken up in the last Congress but that attracted considerable attention in years past.

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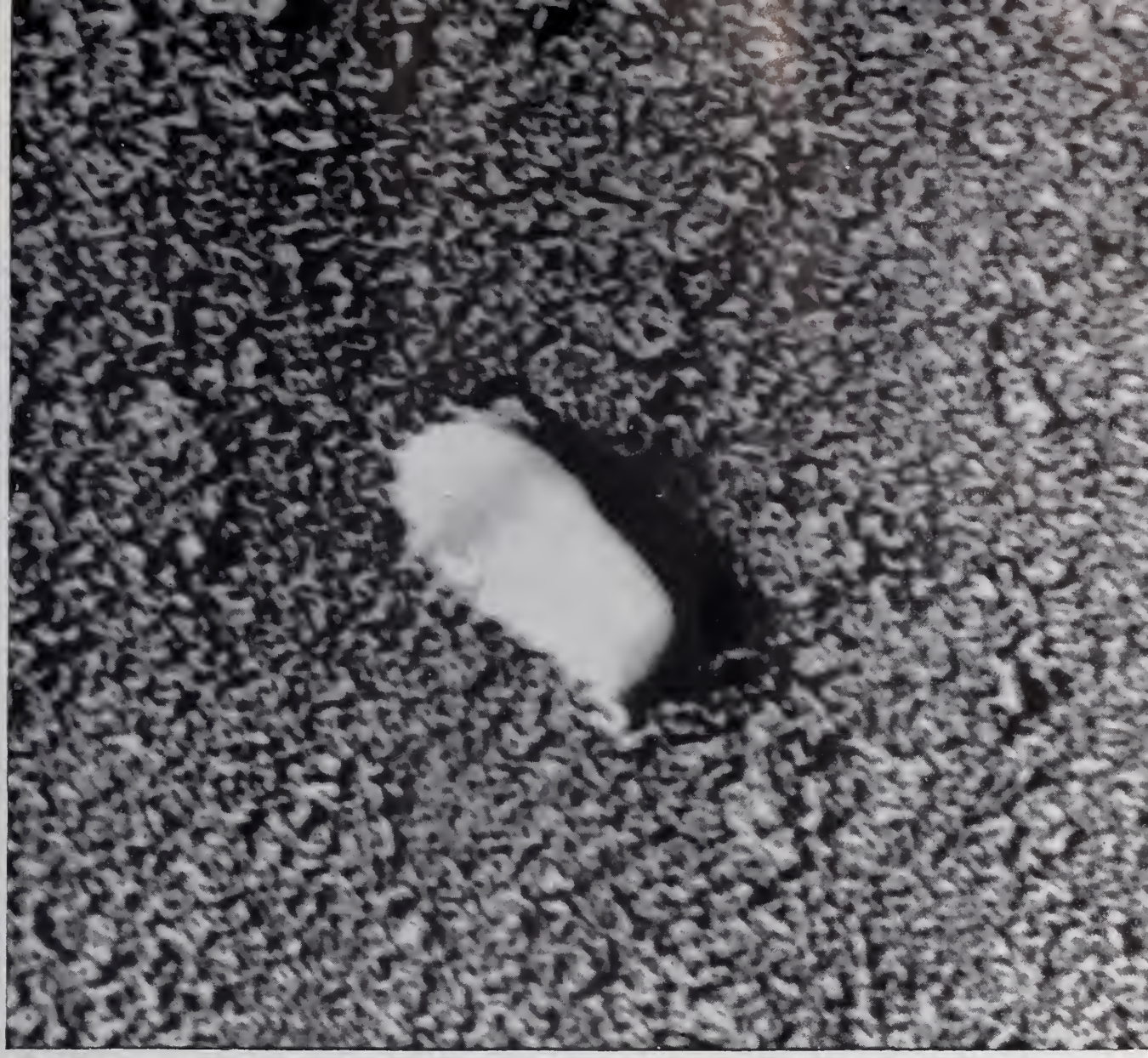

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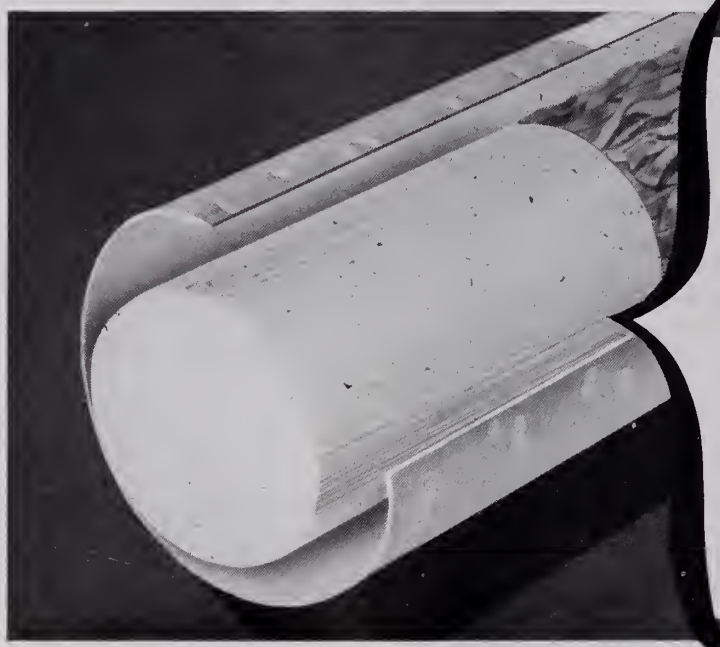

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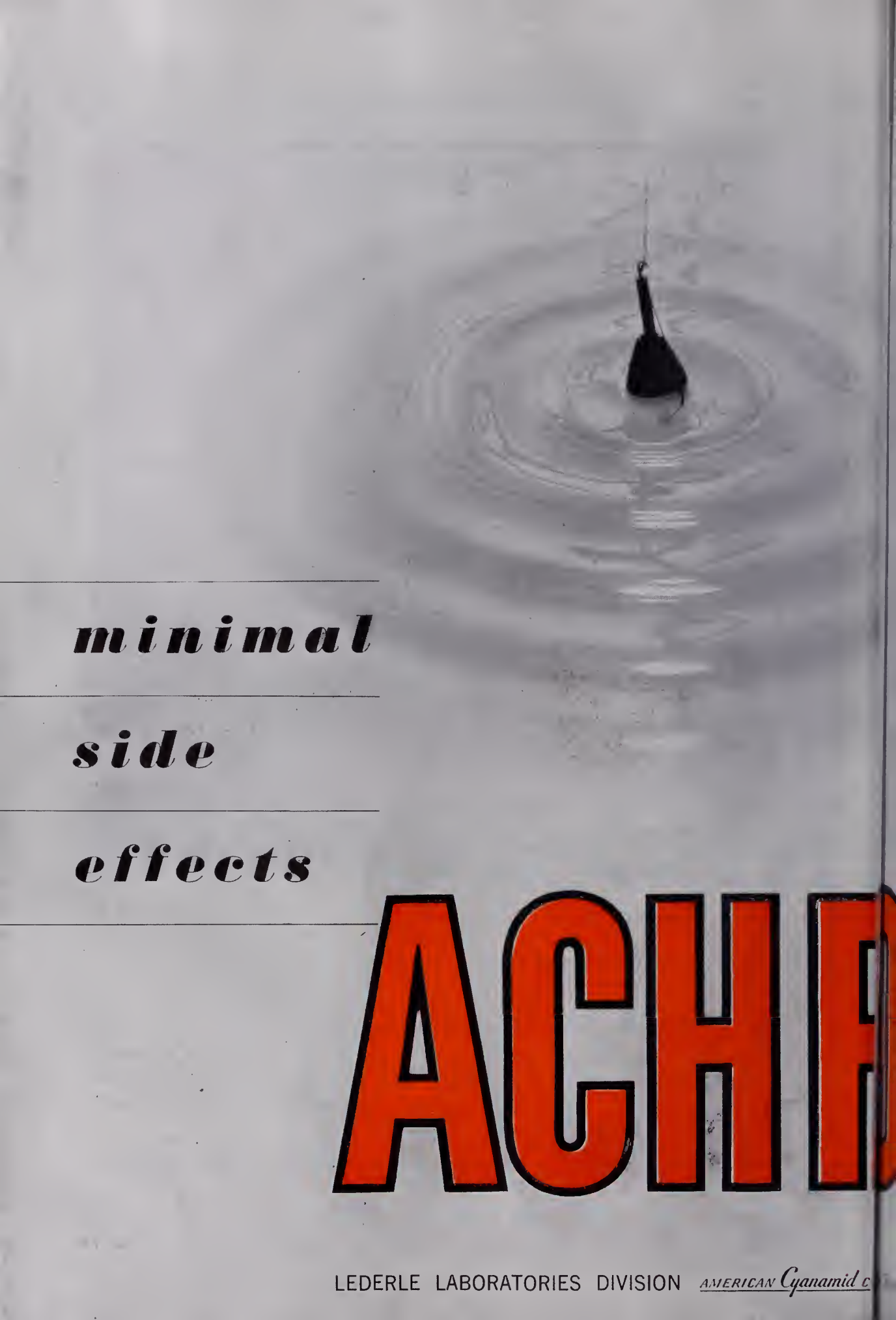

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1. Greenblatt, R. B., and Kupperman, H. S.: M. Clin. North America *30*:576 (May) 1946. 2. McGavack, T. H., in Goldzieher, M. A., and Goldzieher, J. W.: Endocrine Treatment in General Practice, New York, Springer Publishing Company, Inc., 1953, p. 225.

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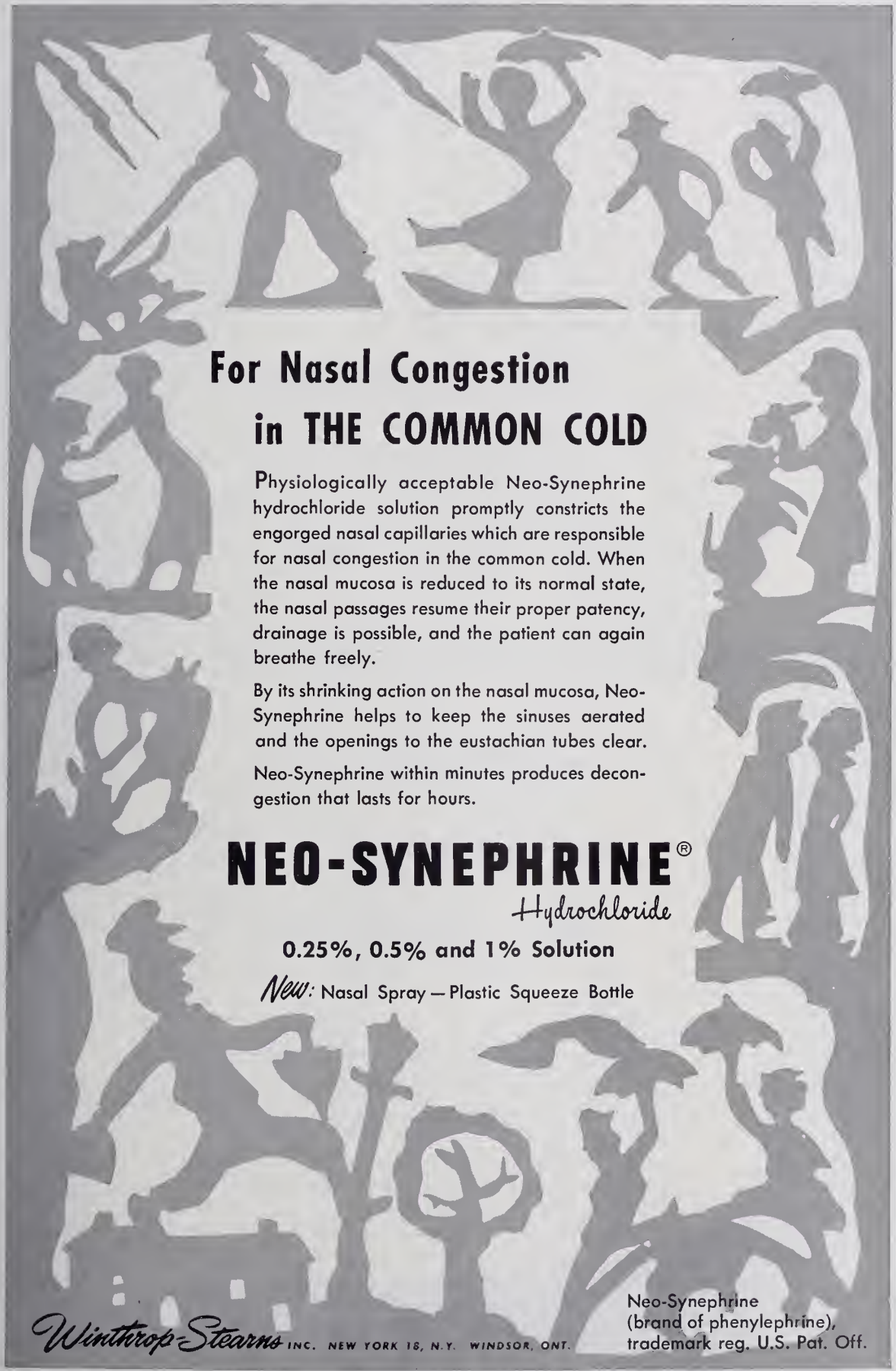
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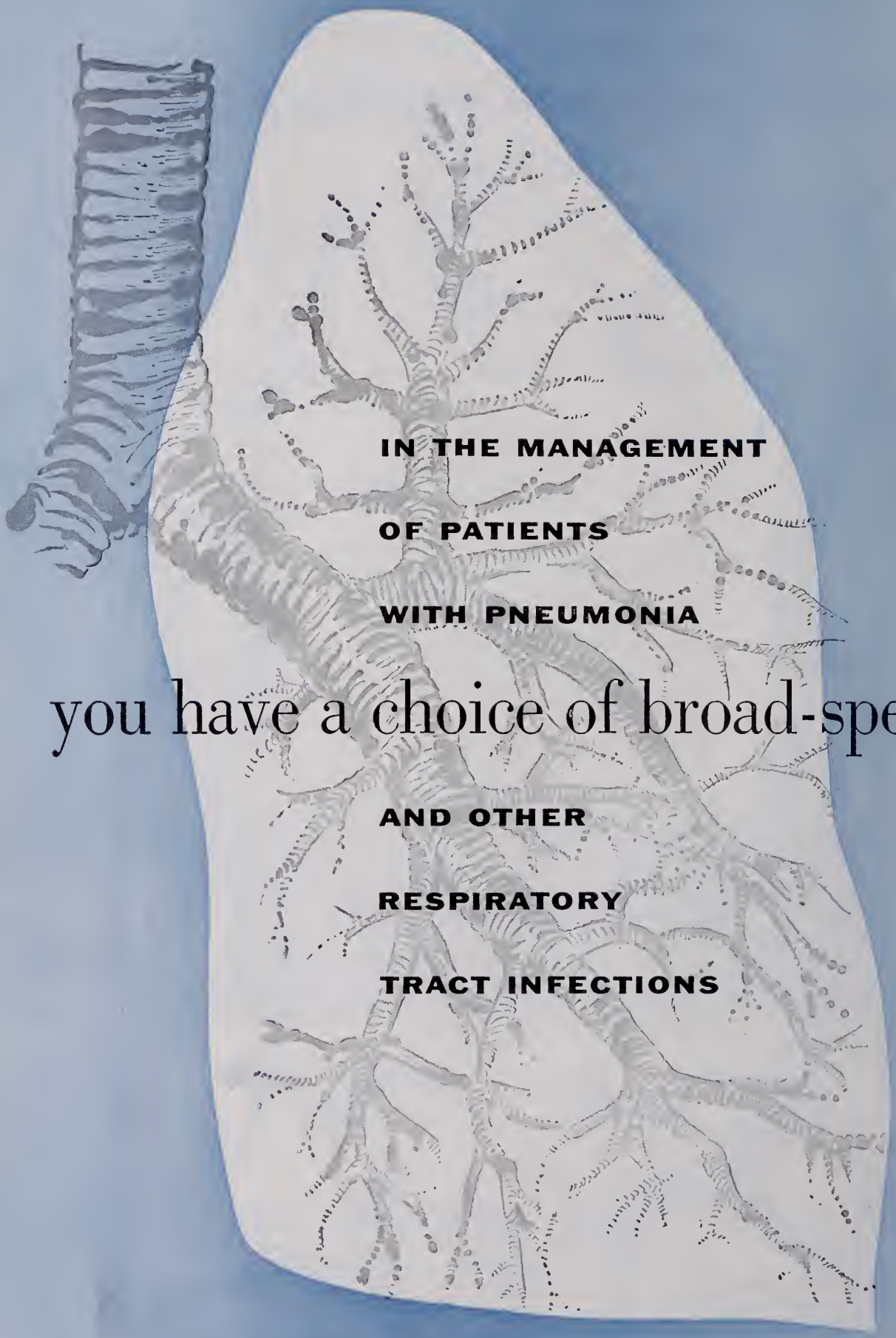

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'Regan, C., and Schwarzer, S.: Pediat. 44:172 (Feb.) 19'1. addington, W. S.; Bergy, . G.; Nielsen, R. L., and irby, W. M. M.: Am. J. M. Sc. 8:164 (Aug.) 1954.

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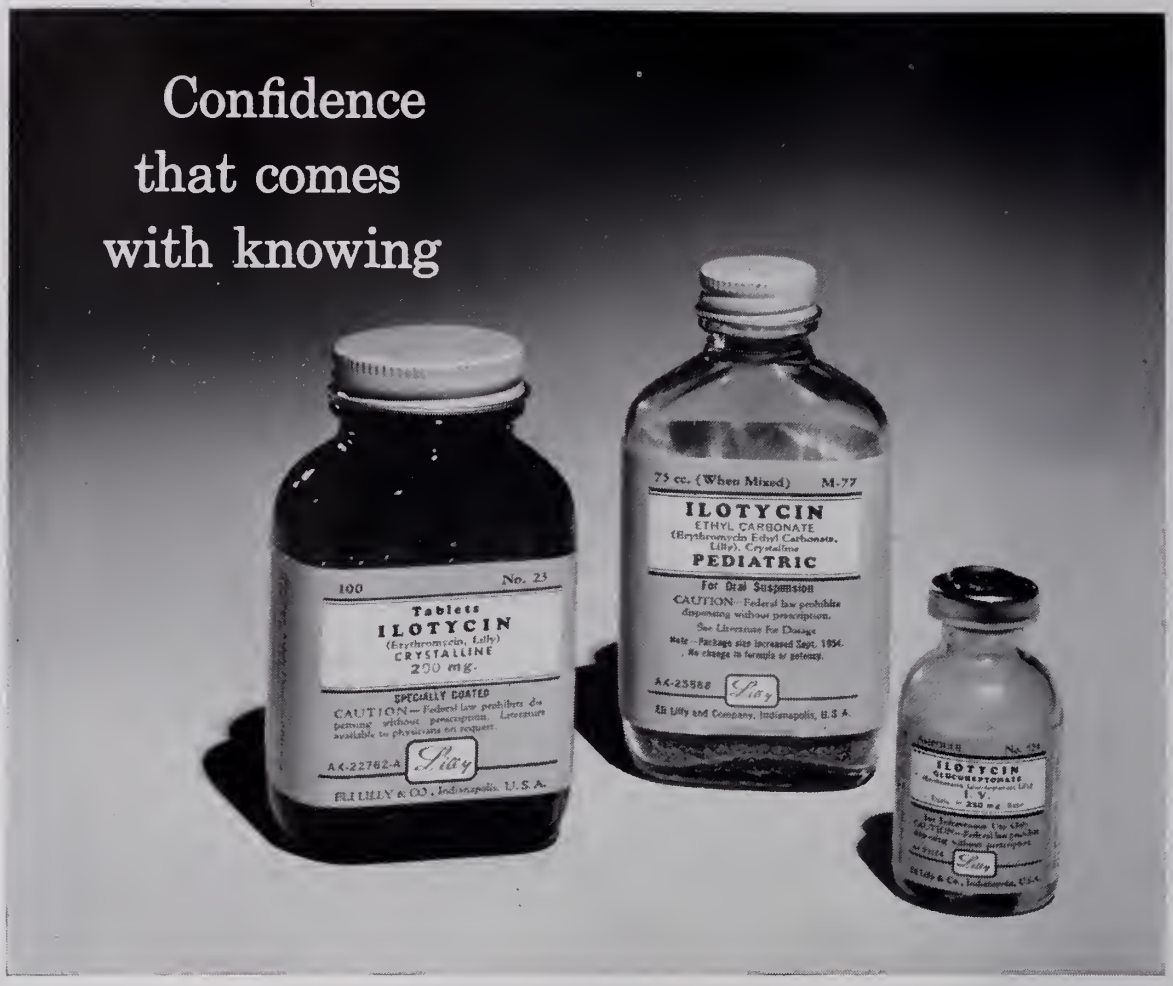

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VOL. 53 JANUARY, 1955 NO. 1

Hyperventilation, A Common Functional Illness*

LEWIS DICKINSON, M.D.

Glasgow

It is noted that the title refers to hyperventilation and not a syndrome. An earlier edition of this paper was presented under the title of "Hyperventilation Syndrome". A discussant rightly called attention to the fact that the patients discussed here do not fit the pattern of a previously described hyperventilation syndrome. Too often we tend to make syndromes with a rigid pattern, and try to make patients conform to the syndrome rather than trying to understand the patient as an individual functioning unit.

A remarkable portion of any medical practice is made up of diagnosis and treatment of symptoms caused by disturbance in function of normal organs, rather than by organic disease. As a physician demonstrates his ability in handling this type case, they begin to make up a larger part of his practice. A recent statistical study of one internist's practice reports 47 percent functional disease[1]. Functional disturbance of the respiratory system is the most common of such disturbances seen in the author's practice. The symptoms are rather characteristic and easily discovered if one is aware of the possibilities. The mechanism of their cause is more easily explained to the patient than in any other functional illness, and the symptoms are demonstrated at will by having the patient hyperventilate.

Hyperventilation occurs when either the depth or rate of respiration is increased beyond that required to satisfy the oxygen requirement of the body.

Mechanisms

The symptoms of hyperventilation come about as the result of increased loss of carbon dioxide from the body. This occurs from the lungs in the course of excess pulmonary ventilation. The usual concentration of carbon dioxide in the alveolar air is 40 mm. partial pressure of mercury[2]. With unduly stimulated breathing this level can be reduced to approximately half of that value within a few seconds. It has been shown that a single deep inspiration and expiration will reduce the arterial CO_2 by 5 volumes percent and the arterial CO_2 tension by 7 to 16 mm. mercury. The changes in arterial CO_2 tension and pH are more rapid during the first 30 to 60 seconds of hyperventilation. After the first minute continued vigorous hyperventilation will lower the CO_2 content only slightly.

Alkalosis thus produced will cause the hemoglobin to cling more tenaciously to its bound oxygen. Less oxygen is relinquished to the tissues as the blood passes through. Tissues low in carbon dioxide cause their blood vessels to contract, thus further reducing the available oxygen[4]. In sensitive tissues such as the brain the effect of anoxia may develop rapidly, producing a reduction of the degree of consciousness. This has been demonstrated with the electro-encephalogram[3], correlating slowing of the EEG with the actual reduction in degree of consciousness. It has also been demonstrated that upright posture favors syncope and horizontal position lessens the reduction in degree of consciousness. If the degree of consciousness is not greatly reduced the hyperventilation may continue for longer periods of time. In these cases the chief manifestation may be increased neuro-muscular irritability or tetany. The chemical background for tetany is readily seen in the following formula:

*Read before a meeting of the Sixth Councilor District of the Kentucky State Medical Association, August 10, 1954, Glasgow, Kentucky.

$$\propto \frac{[Na^+] + [K^+]}{[Ca^{++}] + [Mg^{++}] + [H^+]}$$

Decrease in hydrogen ion concentration increases irritability the same as decrease in calcium ion concentration. In tetany due to alkalosis, serum calcium is normal, however, the calcium may not be in an ionized available form.

Symptomatology

Mouth breathing in hyperventilation produces dryness of the mucous membranes. This in turn causes the patient to moisten his lips with his tongue and moisten the pharynx by swallowing. Such a procedure repeated frequently soon produces a stomach distended with air which in turn produces pain under the end of the sternum and the lower left chest. As drying of the mucous membranes continues, the patient senses inability to swallow or a choking feeling in the throat. Best and Taylor [2] state, "When the mouth is kept perfectly free of saliva, deglutition becomes impossible."

Chest pain is a common symptom in hyperventilation. It may or may not accompany the overbreathing. Various theories have been offered for the sharp knife-like pains which occur in the chest and are exaggerated by respiration. One acceptable theory is that they are caused by an overdistended stomach pressing against the diaphragm. Pressure over the distended stomach of susceptible patients has been demonstrated to initiate pain, tachycardia, premature contractions and an episode of hyperventilation [5]. A second type pain is the dull ache or gnawing pain centered about the left nipple. Examination may show muscle tenderness or a painful costochondral junction. Friedman[6] pointed out that patients with this type of pain, use only the upper chest musculature in respiration and particularly so when hyperventilating. This type of respiration is easily demonstrated by sighing. The upper chest musculature and costochondral junctions are unaccustomed to such extensive motion for so long a period of time and thus soreness of these parts develops. Most patients complain of severe fatigue after hyperventilation.

Cardiac palpitation and increase in heart rate may occur as a result of tissue anoxia, increased respiratory pressure on the great vessels, or the release of adrenalin due to the fight or flight response. Electrocardiographic inversion of T waves and depression of S-T segments have been observed during hyperventilation[7]. The cause of these electrocardiographic changes remains unexplained.

Subjective symptoms such as numbness and tingling and coldness of the limbs, are not definitely understood but are thought to be due to circulatory changes and local tissue effects of alkolosis and anoxia.

Symptoms vary with each patient and are modified by coexisting organic disease, the degree of emotional disturbance, and individual variations in body chemistry and physiology; so that we find it difficult to classify patients into groups or types according to symptoms. The same patient does not always present the same symptoms. The patient may complain of any combination of the following symptoms:

Feeling weak, tired or dizzy, smothering, sighing, yawning, "I can't get enough air into my lungs", "air I breathe doesn't seem to satisfy me", "I can't get a full breath", numbness of the hands and feet, muscular tightness or "drawing" of the hands and feet, fear of fainting, "blacking out", heart attack, epilepsy, nervous spells, pain in the chest, heavy feeling in the chest, choking, a lump in the throat, difficulty in swallowing, cramping in the stomach. The patient may even deny rapid or sighing respiration only to be contradicted by some member of the family who has observed the breathing.

The complaint may be phrased to fit the diagnosis by a previous physician and the diagnosis may be readily missed if the patient is not requested to describe in his own words how he actually felt. The various symptoms must be analyzed by careful questioning in the patient's own language, and the possibility of hyperventilation considered in all patients with vague respiratory complaints.

Precipitating Causes

One of the chief variables is the precipitating cause of hyperventilation. Some apparently well individuals will overbreathe by being unable to reduce depth and rate of breathing following its automatic increase due to exertion, thus the symptoms will occur immediately after cessation of exertion. Some have an explosive onset associated with sudden exposure to cold, pain, fear or other strong emotional upset. In this case hyperventilation serves as preparation for fight or flight, which is the animal response to this type of stimulus. Another type of onset is sighing or yawning which tends to relieve tension or anxiety. Some patients appar-

ently develop a habit of overbreathing when thrown into an unhappy situation, just as the obese patient will reach for food and others under tension will light a cigarette[8].

Regardless of the initiating cause of overbreathing, as the alkalosis begins to develop, the patient usually experiences a giddy feeling, flushing of the face, numbness and tingling of the hands and some blurring of vision. These he may describe as dizziness, turning "blind sick" or feeling like he will faint. Upon analysis it is seen that the dizziness he complains of is not vertigo since there is no feeling of motion of the body or sensation of environment turning about the patient. By the time these symptoms have developed, he senses that something is happening over which he has no control and panic adds to the symptoms. Then the patient attempts to fight off the growing loss of awareness by further hyperventilation.

If the patient is standing or rises to his feet in an attempt to reach fresh air, the influence of upright position added to the sudden increase in hyperventilation brought on by panic, may produce syncope, which automatically terminates the hyperventilation. Although frequently mentioned, this dramatic symptom of syncope rarely occurs.

If the patient assumes the horizontal early in the chain of events, he gradually develops a diminished degree of consciousness, rather than syncope, and may continue to hyperventilate until he develops tightness of the muscles and later clinical tetany.

Case Reports

In the following case histories it will be seen that the diagnosis often depends on factors which the patient will not recall unless the sequence of events is reviewed with attention to seemingly minor and unimportant details of exertion, sighing, position of the body, and preceding emotional feelings.

Case No. 1—A 23-year-old soldier was brought to the post hospital in an ambulance with the history of having passed out on a forced road march. He was examined about 15 minutes after the alleged syncope and found to be entirely normal. After 2 days observation he was returned to duty with a diagnosis of heat exhaustion. The following week he returned to the hospital under similar circumstances and again the third week. On the third admission a more detailed history was obtained. The soldier was a regular army man, well adjusted to his army situation and had withstood several 25 mile road marches better than most of his comrades. On the occasions in question he had passed out, not during the march as previously supposed, but after finishing a forced march that had actually been a 10 mile run. With these facts at hand this was seen to be a case of hyperventilation in which the patient failed to cease rapid respiration after it had been initiated normally by running. This was later borne out when syncope developed after running a short distance. On subsequent occasions he was instructed to lie down and hold his breath with satisfactory results. This case illustrates that functional illness is not necessarily a psychoneurotic illness as frequently supposed.

Case No. 2—One afternoon a call was received to see a 36-year-old white male who was thought to be having a heart attack. Since the patient was known to be an emotionally unstable, periodic drinker, there was delay in answering the call. After another 10 or 15 minutes an urgent call came that the patient was shaking all over and was thought to be having an epileptic fit. When examined the patient was seen to be rapidly and loudly hyperventilating, presenting typical signs of well developed tetany. As would be expected, the patient did not respond to 15 grains of calcium gluconate intravenously. Sodium amytal was then given intravenously at a slow rate. At the beginning of the injection he was unable to speak due to marked tetany of the facial muscles. After 3 grains had been given he ceased to hyperventilate and by the time 5 grains were injected he was relaxed and talking freely. It has been the experience of the author that any therapy other than relief of symptoms and reassurance is wasted at this time. An appointment was made for a complete examination at the office. Since this case is presented to show development of tetany and symptomatic treatment of acute hyperventilation, the precipitating cause and subsequent treatment are omitted.

Case No. 3—A 55-year-old widow complained that she had suffered a heart attack 6 days previously. She had been under medical supervision since that time, receiving digitoxin and 2 injections of mercurials, but continued to have shortness of breath, pain in the left chest and weakness. Her difficulty started suddenly with pain in the left chest and smothering. She had been taken as soon as possible to

a doctor's office 20 miles away, where she was given a hypodermic and an electrocardiogram was made. The doctor stated that the electrocardiogram showed evidence of a heart attack and advised hospitalization. The patient had returned home against advice, but had remained in bed except for a second visit to the doctor's office. She had continued to have a dull aching in the left chest and was unable to get her breath satisfactorily.

Physical examination was normal except for moderate obesity and a blood pressure of 160/80. The retinae showed no evidence of hypertension. Heart sounds were normal. X-ray of the chest showed high diaphragms with transverse position of the heart and early hypertensive contour. The heart chest ratio was 14:28 cm. Sedimentation rate was 14 mm. in 1 hour. (Wintrobe) Venous pressure was 108 mm. saline and arm to tongue circulating time 13 seconds. Standard 12 lead electrocardiogram was normal. The configuration of QRS in lead III demonstrated left axis shift due to transverse position of the heart. This changed to normal on deep inspiration. Finding insufficient evidence to warrant a diagnosis of acute heart disease of any type, the history was reviewed with functional disease in mind.

The patient stated that she had not felt well since her husband had died of high blood pressure and heart dropsy 14 years ago and that she had been treated at intervals during that time for high blood pressure. She had continued to manage her 180 acre farm with the help of her only son. Several months ago the son had married and had continued living in the patient's house. The wife was a likeable girl, but did not take to housework. Instead of helping in the house she preferred to work in the fields so that her presence actually increased the duties of the patient rather than lightening the work as the patient had expected. Although there had been no cross words the patient admitted that she had been disappointed in the daughter-in-law. She further stated that she would rather die than have trouble with the daughter-in-law. With this knowledge of the patient's emotional feeling, we begin to understand the background of anxiety and tension as a basis for the present illness. When it was called to the patient's attention that she frequently sighed during the examination, she stated that she often breathed in this fashion. On the night prior to the "heart attack" she had been tense and restless and had slept little. She recalled that yawning and sighing type of deep breathing did seem to relax the tense feeling some, but that her breathing did not completely satisfy a tense feeling in her chest. She awoke a little later than usual that morning and immediately upon sitting up in bed she felt a thump in her chest like her heart skipped a beat, this startled her and she jumped out of bed gasping for breath. She began to turn "blind sick". A heavy aching pain came in her left chest and she made her way to the open air, breathing rapidly because of a feeling that she could not get enough air into her lungs. She was met in the door by her son and daughter-in-law who hastily dressed her and set off with the patient to a doctor. It took approximately 30 minutes to reach the doctor's office and the patient recalled that she was breathing rapidly all the time. Upon arrival at the doctor's office, she was given a hypodermic by a nurse and an electrocardiogram was made. She continued to breathe rapidly while the electrocardiogram was being made. After the tracing was completed the doctor arrived to examine her and the tracing. She was informed that the electrocardiogram showed changes of recent heart damage of serious nature. From the patient's story, it is supposed that the electrocardiogram showed depressed S-T segments due to hyperventilation since our tracing six days later failed to show any changes representing acute heart damage.

This patient was given no medication except Seconal gr ¾ at bedtime and Dexedrine, 5 mg before meals. She was reassured that she had not had a heart attack and the mechanism of her symptoms was explained to her in a manner similar to that in the following case. Although symptoms are relieved some and the patient acknowledges emotional problems, she requires occasional visits for discussion of her problems and reassurance, since she has failed to make any adjustment in her emotional problems.

This case illustrates the necessity of repeating a history when the information given by the patient is insufficient. Often the patient will discuss emotional problems freely when it is explained after a complete examination that the examination does not reveal any organic disease and the nature of the symptoms suggests a disturbance in function, probably due to emotional tension.

CASE NO. 4—A 48-year-old minister's wife requested examination because she believed she had heart trouble. Family history revealed that her mother had died

of heart disease at 81 years, an older brother had died of coronary artery disease 1 year ago and another brother was under treatment for angina pectoris. During the past 12 months she had menstruated only once, there had been an occasional hot flush and the patient stated she believed she was in the menopause. However, her attitude and understanding of the menopause was better than average. Recently the family had moved to a new community and a much larger house. The housework, care of her 4 children and the responsibilities of a preacher's wife were more than she felt she could properly do. The chief symptoms, pain in the left chest and difficulty in getting a deep breath, had been present for about 2 months and had become much worse during the past month. At times the pain consisted of a heavy feeling in the left chest which lasted for hours. At other times it was described as "indigestion pain" under the left costal margin and again it was a sharp pain centered around the left breast and seemed to spread out all over the left chest "around the heart". When the sharp pains strike she remains still, and is unable to speak for a few seconds, then the pain goes away as suddenly as it came. She did not recall that she had ever had pain while actively working or vigorously walking, it has always come on at rest. When attention was called to frequent sighing type respiration, she stated that it seemed to ease the heavy feeling in the left chest, but did not completely relieve it. Several days prior to the examination while sitting in church, she felt the heavy feeling in her chest and deep breathing did not appear to relieve it. She felt that she was smothering and as a numb feeling came over her, she felt that she was going to faint if she did not get outside to fresh air. She jumped up and made her way out a nearby side door. Just as the door closed behind her she fainted. When she recovered consciousness her heart was pounding and she was trembling, but otherwise felt alright and no more chest pain or difficult breathing occurred that day.

(At this point the examiner often feels confident of the diagnosis. No matter how great the temptation, the physical examination, chest x-ray and electrocardiogram should not be omitted. They are not only essential in diagnosis, they are a very important part of the treatment. The more thorough the examination the more confidence the patient places in the examiners opinions.)

In this case the physical examination was normal. The blood pressure was 110/-80, chest x-ray, electrocardiogram, blood count and urinalysis were normal. After examination, when the patient was comfortably seated, the following explanation was given her:

"Mrs. Blank, your examination shows all your organs to be normal. You have no evidence of organic disease. However, you have explained to me that the symptoms which you have presented are due to a disturbance in function of normal organs rather than diseased organs. You have built up emotional tension due to the frustration of having more housework, family responsibility and church responsibility than one person can satisfactorily accomplish. This tension is also aggravated by fear of heart trouble and by the disturbed endocrine balance of the menopause. By chance you have discovered that the tension is relieved some by sighing. Eventually sighing becomes deep enough and frequent enough to produce overbreathing. This does not mean that you breathe too much fresh air into the lungs, it means that you breathe too much carbon dioxide out of the lungs. This has disturbed the delicate chemical balance in your body which has produced your symptoms. If you will breathe deeply and rapidly as I show you, you will notice the feeling you have previously experienced developing. As you continue you will note the tiring effect it has on the chest muscles. This leads to the aching pains you have in your chest. Of course you will not faint since you are overbreathing on purpose and will stop when your symptoms become unpleasant. During your experience that led to fainting, you become frightened at this stage and rose to your feet, at the same time increasing your overbreathing. Some people, like yourself, who have a low normal blood pressure are subject to orthostatic hypotension. This means that when you stand up suddenly the body adjusts slowly to this change and as a result the blood pressure falls before the adjustment can be completed. This factor undoubtedly added to the overbreathing to produce your fainting spell.

Understanding the cause of your symptoms is the first step in treatment, but understanding alone will not cure you. You must find ways of lessening your tension as well as consciously trying to breathe slowly and normally. Medication with hormones will effect a more even balance in your endocrine system and mild sedative medicines will help to relax your

tension, but you must help by making some adjustment to reduce your home or church responsibilities. Your doctor cannot tell you how to run your home or your church. He can only point out these things as contributing to the cause of your emotional tension. I hope the reassurance that you have no heart disease will help some in lessening the tension. If you have any further disturbance do not hesitate to return for further treatment."

In this case further treatment was not necessary. However, some will require more extensive psychiatric analysis and some will become worse in spite of realizing that overbreathing causes their symptoms. The sudden focusing of attention on the mechanism of overbreathing causes them to become more tense and hyperventilation occurs in spite of an effort to stop it. Some of these patients get relief by splinting their chest with a rib belt or tape to prevent expansion of the upper chest, only to develop symptoms again as soon as the splinting is removed.

Summary and Conclusions

Hyperventilation has been described and the cause of symptoms has been explained on a physiological basis. Four cases, each with different signs and symptoms, have been presented to illustrate the varying patterns manifest by the disease. The author's methods of treatment have been presented briefly, not necessarily as recommended treatment, but to show that the patient is entitled to an understanding of his disease. With this type of understanding, the patient leaves the office with a feeling of gratitude and that his money and time have been well spent. If he fails to understand he goes from doctor to doctor with resentment at being told that there is nothing wrong or "it is just nerves."

To the physician an understanding of hyperventilation offers a simple and well founded introduction to the more complex functional diseases.

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Diverticulitis*

COLEMAN C. JOHNSTON, M.D., FACS

DAVID A. HULL, M.D.

Lexington

Diverticulitis is of current interest because of the increasing incidence of this disease. The rising longevity of the population, in addition to the greater accuracy of our diagnostic abilities, is responsible for this upward trend. During the past decade progress in anesthesia, pre- and postoperative management, chemotherapeutic and antibiotic drugs have stimulated a more aggressive attitude in the treatment of diverticulitis. The purpose of this paper is to review the changing trends in the treatment of this disease and to present the findings of a study of 47 patients suffering from diverticulitis admitted to the St. Joseph Hospital, Lexington, Kentucky during the past five years.

*Read before the Kentucky Surgical Society, French Lick, Indiana, May 14, 1954.

History

Diverticula of the large bowel, first observed by Littre in 1700, were described in Ballie's Anatomy in 1794. Virchow and others wrote of diverticulosis in the mid 19th century. It was, however, not until 1898 that Graser first recognized the true relationship between diverticula and the stenosing inflammatory lesions of the colon so difficult to distinguish from an obstructing carcinoma of the large bowel.

By the turn of the century there had accumulated a voluminous literature on the subject. In 1904, Beer, an American, published an extensive treatise on diverticulosis and at that time considered the possibility of inflammatory changes in the mucosa of the colon as predisposing to malignant degeneration.

In 1907, Moynihan and also Mayo reported resecting inflammatory lesions of the colon, which at operation were believed to be malignant. In 1911, Wilson first concluded that diverticulitis was definitely a precursor of cancer of the colon and to lend support to this thesis, Mayo in 1917 reported 13 cases of co-existant cancer and diverticulitis. However the fallacy of this relationship has long since been established and re-emphasized in 1950 by Rowe and Kollmar who reviewed the literature to find only 62 reported cases.

Etiology

Diverticulitis of the large bowel presupposes the presence of one or more diverticula. Although the etiology of diverticulosis of the colon is not clear, usually the lesions are acquired and develop during the period of degenerative changes which occurs in the declining years of life. There have been isolated instances of a familial predisposition to diverticulosis of the colon and occasionally it is found in the infant and child. There is also a somewhat greater predilection to the formation of diverticula elsewhere in the gastrointestinal tract in those patients with diverticulosis of the large bowel, than in the normal person.

Many theories have been proposed to explain the origin of diverticulosis but none have met with universal support. Suffice it to say, that with a weakness in the wall and an increase in intra-colonic pressure, diverticulitis will result. This weakness occurs with age, depletion and weight loss. These factors associated with the normal propulsive forces of the bowel, hyper-motility, spasm, stasis, constipation, and gas formation all contribute to the development of diverticulosis.

Diverticula are herniations of the mucosa through the bowel wall, usually occurring in groups along the lines of penetration of the blood vessels as they pass through the muscular coat. They are commonly found in large numbers in the sigmoid, decreasing in frequency in the more proximal colon. At times they are found to involve the cecum and rarely the transverse and ascending colon. These weaknesses, at first small protrusions, will slowly increase in size to present small balloon-like masses on the surface of the bowel, varying from one-half to possibly two centimeters in diameter.

Pathology

Inflammatory changes in the pre-existing diverticula follow a distinct pattern. A diverticula becomes filled with stool, the mucosal lining becomes irritated and subsequently inflamed. Edema occludes the narrow neck of the sac to obstruct the outlet. The inflammatory process may subside only to recur at a subsequent attack and often with renewed vigor. With the increasing number of attacks one or more of the complications may develop.

Perforation is the most serious complication of diverticulitis and may result in a generalized peritonitis, localized peritonitis, abscess or fistula formation. Ochsner and Barger found generalized peritonitis to be relatively uncommon, occurring in 2.4 percent of their series. On the other hand perforation was found by Graham to account for 25 percent of the surgical indications in his series of 44 patients. Acute perforation with generalized peritonitis is usually the result of an early acute process involving a single diverticulum, which has progressed rapidly to perforate before adjacent structures have become adherent to the involved area. In localized peritonitis the contaminated area has been contained by the adherence of adjacent viscera and parietes, which has developed over a relatively long period of time.

Abscess formation may be limited to a single diverticula, to multiple small areas in the thickened fibrotic bowel wall itself, to an epiploic appendix, or to the mesentery into which a suppurative diverticulum may have perforated. These abscesses may be large or small, single or multiple, but in general they suggest a chronicity of the inflammatory process. The abscess may remain localized, may perforate into adjacent viscera, through the parietes on to the skin, or may be evacuated through the original site of perforation. Though difficult to determine, this latter process of evacuation may be considerably more common than one would expect.

Fistula may extend to the cutaneous surfaces or to adjacent viscera. The former usually follow either spontaneous or surgical drainage of a diverticular abscess. The latter occur following adherence to and finally necrosis of the visceral wall. It is the result of a slow process occurring as a relatively late complication of the disease. Mayo in reviewing 70 cases of fistula, secondary to diverticulitis, found that over two-thirds involved the bladder, while less than one-third extended to the skin. There were 11 patients with multiple fistula and in 5 the fistula involved the sigmoid and were found to occur five times more often in men than in women, because of the protective effect of the

uterus and adnexal structures in the female.

Obstruction of the large bowel is not an uncommon manifestation in diverticulitis. The initial obstructive process, at first the result of spasm associated with acute inflammatory changes, gradually gives way to chronic fibrosis which follows the repeated inflammatory episodes with resultant complete bowel obstruction. Perforation is rarely seen in this advanced stage of the disease. It is in this group that often there is found great difficulty in distinguishing between the inflammatory and the malignant lesions of the colon. Usually obstruction occurs in the sigmoid and, as Pemberton pointed out, in about 25 percent of these patients with extensive far advanced chronic inflammatory changes, the lesion is grossly indistinguishable from carcinoma of the colon.

Bleeding is the third major complication of diverticulitis. As a general rule, this is usually a repeated small blood loss and demands the exclusion of a possible malignancy. Occasionally exsanguinating hemorrhage may occur. Dr. Jones of Boston was among the first to emphasize the likelihood of bleeding arising from a malignant lesion rather than an area of diverticulitis. Blood loss was reported in 16.5 percent of 200 patients studied by LeRoyer and White, in 26 percent of a series reported by Young and Young and in 27 percent of 114 operative patients with diverticulitis studied by Welch, Allen and Donaldson. This group further emphasized that bleeding from sigmoid carcinoma occurs five times more often than from sigmoid diverticulitis.

Incidence

Welch, Allen and Donaldson estimate that approximately 5-10 percent of all patients over 40 years of age develop diverticulosis. They observed that in a series of 2,000 consecutive barium enemas diverticulosis was found in increasing frequency with the rising age. Morton found diverticulosis present in 15 percent of 8,500 autopsies and at the Mayo Clinic it was observed that 8½ percent of 47,000 barium enemas revealed diverticulosis.

D. F. Jones of Boston noted that between 12 and 15 percent of those patients with diverticulosis developed inflammatory changes, while Welch, et al., found this figure to range between 10 and 20 percent. Pemberton and his co-workers found that 24 percent of their series of 600 patients with diverticulitis required surgical intervention.

Fallis and Marshall observed that in 500,000 admissions to the Henry Ford Hospital in Detroit, only 94 patients were seen with diverticulitis, an incidence of about one in 5,000. Among approximately 60,000 patients admitted to the St. Joseph Hospital in Lexington, Kentucky during a five year period, 47 patients were treated for diverticulitis, an incidence of 1 in 1,200 admissions.

Briefly then, we find that somewhere between 5 and 10 percent of all patients over forty develop diverticulosis, that between 10 and 20 percent of those with diverticulosis will develop diverticulitis and finally, that between 20 and 25 percent of those with diverticulitis will require surgical management.

Symptomatology

Classically the patient is over forty years of age with a past history of progressive constipation, possibly diarrhea or alternating constipation and diarrhea. Mild to moderate gaseous distention is not uncommon. These symptoms are aggravated by a high residue diet. Intermittent bouts of lower abdominal pain and discomfort characterize the acute phase of this disease. Dull aching pain suggests a localized inflammatory process whereas cramping, colicky pain connotes obstruction. All degrees of this picture may exist, however the patient may seek consultation only after one of the complications has developed.

Of 94 patients studied by Fallis and Marshall 31.0 percent had a previous history of diverticulitis. In the present series 11 patients or 23.4 percent had a previous history of diverticulitis.

Pain, a frequent complaint in this disease, is usually confined to the left lower quadrant but may occur in the right lower abdomen, from distention of the cecum. In the present series, pain of some degree was seen in 37 patients or 78.8 percent. Fourteen of these complained of left lower quadrant pain, fifteen described the pain as being present in the lower abdomen, six noted a generalized abdominal pain and in two patients it was chiefly confined to the right lower quadrant. Pain was the chief complaint in 57.4 percent of this series.

Laufman notes about 60 percent of patients with diverticulitis give a history of constipation alone or constipation alternating with diarrhea. Constipation was present in this series in eighteen cases or 38.3 percent.

Diarrhea is often associated with tenesmus and possibly the passage of mucous or blood. A change in bowel habit, commonly seen in malignant disease of the large bowel, may also be seen in diverticulitis. This occurred in 10.6 percent of the reported series.

Bleeding, as previously observed, is not uncommon. In this series it was present in 19 percent of the group and in one patient was reported as a massive hemorrhage.

Although bloating, belching and the passage of flatus are common, abdominal distention due to ileus or obstruction is less frequently seen. It was present in 6 cases of this series or 12.8 percent.

Diagnosis

The diagnosis of diverticulitis should be suspected in a patient over forty years of age, complaining of lower abdominal pain, fever, irregularity of bowel habits and usually with a previous history of similar episodes. If the process is recurrent, or of several weeks duration, signs of obstruction, perforation, abscess or fistula formation may be observed.

In addition to an awareness of the disease, sigmoidoscopy and barium enema are of distinct value.

Sigmoidoscopy is useful because of negative as well as positive findings. Jackman and Buie list five signs suggestive of diverticulitis: 1. limited mobility of a segment of the bowel that is normally freely movable, 2. angulation of the upper part of the rectum due to inflammation, 3. reduced lumen and adherent mucosal folds, 4. sacculations of the sigmoid and 5. actual visualization of the diverticula.

Barium enema in the hands of a competent roentgenologist is the most valuable aid in establishing the diagnosis of diverticulitis and revealing the presence of its complications.

Schatzki has pointed out that often the differential diagnosis between diverticulitis and carcinoma of the sigmond is difficult. He calls particular attention to the fibrostenotic lesion causing the greatest incidence of diagnostic error, not only by means of barium enema but by direct visualization as well as palpation. If the lumen is completely obstructed the differential diagnosis is impossible.

In perisigmoidal abscess, barium may pass through the perforation to outline the abscess cavity. A sigmoidovesical fistula is usually not demonstrable by means of barium enema but the passage of gas and feces through the urinary tract should be diagnostic.

Treatment

Medical Treatment: Briefly the conservative treatment of diverticulitis is directed toward control of the inflammatory process. This is accomplished through the generous use of antibiotics and chemotherapeutic agents administered both parenterally and orally and reducing irritation of the involved bowel. Bulk laxatives to soften the stool, anti-spasmotics to reduce bowel motility and a low residue diet are the chief methods of controlling the latter. This regime must be continued indefinitely.

Surgical Treatment: The ultimate aim in the surgical treatment of diverticulitis of the colon is eradication of the diseased portion of the bowel and re-establishment of continuity within the shortest space of time and with a minimal morbidity and mortality.

Because radical surgery in the early twentieth century caused a prohibitive mortality many conservative and palliative procedures were devised.

Many of these outmoded procedures are still found to be in use. Figure 1 illustrates the procedures used at St. Joseph Hospital in the past five years.

The excision of an inflamed diverticulum or closure of a perforated diverticulum in an area of diverticulitis is not now considered good surgery, because of the limited scope of the procedure in contrast to the extensive inflammatory process usually present. In this series the procedure was used in three cases.

Exteriorization, or the Mikulicz operation, was a popular procedure. It was used in 76 of 202 operations for diverticulitis treated at the Mayo Clinic between 1939 and 1948.

The exteriorization procedure has two shortcomings. First, it presupposes an additional and unnecessary stage operation,

Figure I.

PROCEDURES USED AT ST. JOSEPH HOSPITAL 1949-53

Operation	Number of Cases
Excision diverticulum	3 cases
Obstructive resection	2 cases
Colostomy only	3 cases
Incision and drainage	1 case
Staged surgical procedures	2 cases
Erroneous resection for carcinoma	1 case
Exploratory laparotomy	1 case
Total	13 cases

because any bowel that can be exteriorized may, with its mesentery, be excised at the same operation. Secondly, if by chance a malignant lesion should be present in the exteriorized segment, the procedure carries a 12 percent incidence of local recurrence.

The obstructive resection with a three bladed clamp, generally considered to be outmoded in the treatment of malignant lesions of the bowel, was used in two cases. It would seem best replaced by the decompressive resection, thereby eliminating the obstructive hazard. In this procedure the proximal loop of the obstructive resection is decompressed by means of a No. 22 mushroom catheter anchored in place with a purse-string suture.

Cecostomy although not used in this series is mentioned only to be condemned as an unsatisfactory and ineffectual procedure.

The colostomy has often proven a lifesaving procedure in the critically ill patient with one of the complications of diverticulitis. With it the bowel is decompressed and the fecal stream diverted. The bowel is placed entirely at rest, thereby giving free rein to those forces struggling to combat the local inflammatory process. Colostomy is a stage in the definitive surgical treatment of a patient with diverticulitis. The transverse colon is the usual site of election and we prefer the loop colostomy.

It must be emphasized that although colostomy alone may be followed by complete recovery from a severe episode of diverticulitis with any one of the several complications, closure of the colostomy alone will be followed by recurrence of the inflammatory process in 45 to 68 percent of the cases as reported by Smithwick and Pemberton respectively. In this series colostomy alone was used three times.

Incision and drainage of a diverticular abscess, a poor procedure at best, must be reserved for the critically ill patient. This procedure was used in one case and proved to be the only fatality of this series.

Emphasizing the difficulty of distinguishing the benign from the malignant lesion one patient in this series underwent radical extirpation of an inflammatory lesion, thought at operation to be malignant.

Indications For Operation

Present day indications for the operative management of diverticulitis include not only the complications but have been broadened to include uncomplicated diverticulitis under certain circumstances. For example, Welch, Allen and Donaldson and others feel that surgery is indicated in 1. repeated attacks of diverticulitis while on a good medical management, 2. in diverticulitis appearing in patients under fifty years of age, 3. when severe persistent deformity of the sigmoid is demonstrated by x-ray and 4. when urinary symptoms develop in the presence of diverticulitis.

In the surgical treatment of diverticulitis with obstruction one of the three methods may be used, 1. primary resection, 2. decompressive resection and 3. a three stage procedure.

Primary Resection: If decompression can be accomplished by means of intubation, parenteral feedings and careful rectal irrigations, primary resection may be carried out after the inflammatory process has subsided. A relatively small group of patients will be found amenable to this form of treatment.

Decompressive Resection: This procedure is reserved for those patients in whom primary anastomosis is impossible although the involved bowel may be exteriorized and excised, the double barrel colostomy to be closed at a later date.

Three Stage Procedures: This is the commonest method of treating obstructed diverticulitis. It consists of transverse colostomy followed by resection of the involved bowel with primary anastomosis. Closure of the colostomy comprises the third stage. The interval between the first and second stage is dependent upon the extent of the inflammatory process. The inability to distinguish between the fibrostenotic inflammatory lesion and obstructing carcinoma demands minimal time loss between decompression and resection.

Acute perforation also demands staged surgical procedure. Immediate exploration for the control of spillage and deflection of the fecal current is imperative. This may be carried out by means of colostomy and closure of the perforation or by decompressive resection, excising the involved segment of bowel. Colostomy and closure of the perforation will require a resection in about 12 weeks. The subsequent management of the decompressive resection may be carried out as previously described.

Abscess, secondary to ruptured diverticulitis, is best treated by colostomy and evacuation through the bowel if possible.

This may occur spontaneously. If chemotherapeutic and antibiotic medication have been administered and sufficient time elapsed to develop adequate protection, evacuation may be effected at the time of colostomy. Again, after subsidence of the inflammatory process, resection will be necessary as the second stage procedure and ultimately closure of the colostomy will complete the third stage of the surgical treatment.

Fistula must be treated by stage operations. Colostomy is the initial procedure. Resection of the involved bowel segment and excision of the fistulous tract is the second stage and should follow by from 6 to 12 weeks. Primary anastomosis is the reconstructive procedure of choice. The bladder, if involved, is repaired by a two layer closure after excision of the fistulous tract. The importance of staged procedures in the management of sigmoidovesical fistula cannot be overemphasized.

Bleeding complicating diverticulitis is usually the result of a localized erosion and primary resection may be carried out as an elective procedure after adequate preparation. On the other hand, if massive exsanguinating hemorrhage cannot be controlled, then an emergency decompressive resection of the involved loop may be necessary.

Interval resection for the 4 indications, as suggested by Welch, et al., presupposes careful preoperative preparation which, barring misfortune, should permit a primary anastomosis with almost negligible difficulty.

It is now generally agreed that, if at the appropriate time, surgery is elected for the treatment of diverticulitis, many complications will be avoided and many more resections with primary anastomosis will be possible. Far fewer staged procedures will be necessary while in addition the interval between stages will be shortened.

Conclusions

1. The etiology, pathology, symptomatology and current treatment of diverticulitis has been reviewed.

2. Forty-seven cases of diverticulitis of the colon, admitted to the St. Joseph Hospital, Lexington, Kentucky in the past five years are presented.

3. There were 13 cases or 27.6 percent of this group who underwent surgery with an operative mortality of 7.6 percent.

4. Perforation, obstruction, bleeding and suspected carcinoma are the accepted indications for the surgical treatment of diverticulitis.

5. We are in accord with those who advocate primary resection for uncomplicated diverticulitis under the following circumstances:

a. Repeated episodes of diverticulitis under medical management.

b. Diverticulitis in patients under fifty years of age.

c. X-ray evidence of severe persistent deformity.

d. Urinary symptoms in the presence of diverticulitis.

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Infectious Mononucleosis With Cardiac Involvement

J. L. MULLIGAN, M.D.*

Louisville

Only in the past decade has it been recognized that the heart may frequently be involved in Infectious Mononucleosis. The use of the electrocardiogram in epidemics or large series has enabled the physician to recognize, in the absence of cardiac symptoms, many abnormal patterns. Recent reports of Infectious Mononucleosis with symptomatic cardiac involvement enlarges the differential diagnosis of the etiology of myocarditis and pericarditis. At the same time, the exact definition of the cardiac effects deserves careful study to elucidate the direct or indirect morbidity and mortality rates.

Case Report

The following case report represents symptomatic cardiac involvement in a patient with Infectious Mononucleosis. A survey of present information of this facet of a protean disease will follow.

The patient, a 15 year old white female, was admitted to St. Joseph Infirmary to Dr. P. J. Murphy's service on July 6, 1953. The presenting complaint was chest pain.

During the preceding month the patient had complained of malaise and had lost several pounds. Two weeks prior to admission the patient developed a sore throat, and subsequently complained of enlarged neck glands and a frontal headache. The patient was treated with chlortetracycline (Aureomycin) 1 gram daily, and the temperature during this period did not exceed 101.0 (F). During the seven days preceding hospital admission the initial symptoms persisted, chlortetracycline was discontinued and the patient was placed on a Bacitracin and H_2O_2 mouthwash. Shortly afterwards the patient noted an erythematous macular rash of transient duration on the left ankle and swelling about the eyes, which persisted to admission. At 6 p. m. on July 5th, the patient complained of moderately severe substernal chest pain. Despite bed rest, in about eight hours the pain became sharp and severe, producing a choking sensation with shortness of breath. Meperidine (Demerol) relieved the pain temporarily and the patient was admitted to the hospital. The patient had been afebrile for two days prior to admission but eight hours after the onset of chest pain, the temperature was 101.0 (F). The substernal pain had never radiated, but was increased on deep breathing and change of position.

The past history was non-contributory.

The initial physical examination revealed a poorly nourished asthenic patient who was acutely ill. The blood pressure was 116/74 and the pulse was 120 per minute. The height was 62 inches, and the weight was 85 pounds. The patient was slightly dehydrated and periorbital edema was noted. The pharynx was red, and a white macule on an erythematous base was present on the uvula. The cervical, axillary and inguinal nodes were moderately enlarged but non-tender. There was a Grade I apical systolic murmur; there was no detectable cardiomegaly. The spleen extended one centimeter below the left costal margin and was not tender.

Laboratory studies on admission revealed an erythrocyte count of 5.04 million with 13 grams of hemoglobin. The leukocyte count was 14,600 with 54 polymorphs, 38 lymphocytes, 6 monocytes and 2 eosinophils. Urinalysis findings were normal. A blood Kahn was negative. An electrocardiogram revealed a P-R interval of 0.20-0.22 seconds with a ventricular rate of 100. The T wave was low in Lead I, isoelectric in Lead II, and inverted in Lead III. The S-T segments were slightly elevated in V2, V3 and V4.

The patient was placed on cortisone (initially 200 mgms daily), 0.5 grams of streptomycin and 400,000 units of procaine penicillin daily, parenteral fluids and bed rest.

The patient remained febrile on the following day and continued to have substernal chest pain which was relieved by opiates. A heterophile antibody test (Davidsohn Presumptive) on the same day was reported positive through a serum dilution of 1:7168. The sedimentation rate (Cutler method) was 25 mm. in 60 minutes. A chest roentgenogram revealed a normal cardiac silhouette with increased markings in both lung bases. The temperature was normal on the third hospital day but some substernal discomfort continued and a transient pericardial friction

*Resident, Department of Medicine St. Joseph Infirmary, Louisville, Ky.

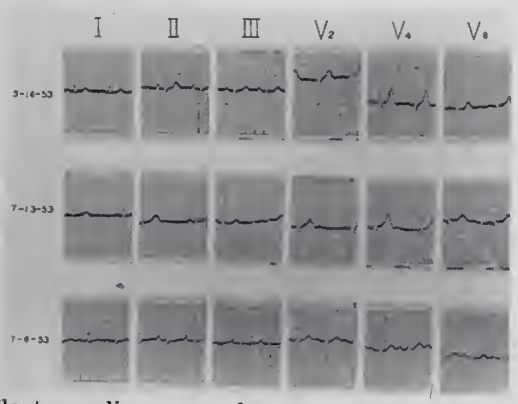
rub was heard. By the fourth day, the pharyngitis was clearing and the spleen was no longer palpable. There were no chest complaints and the tachycardia had subsided. The apical murmur had disappeared by the seventh day and on the eighth day, July 13th, the patient was discharged. The heterophile antibody titre was 1:448, the sedimentation rate was 13 mm. in one hour, and the electrocardiogram showed improvement. The P-R interval was 0.16 seconds with a ventricular rate of 65 per minute. The T-waves were upright in the limb leads, but the S-T segments in V2, V3, V4 and V6 were slightly elevated.

The patient was kept in bed at home and continued on cortisone in diminishing doses for a total of 30 days. An electrocardiogram on August 14th was essentially normal and the heterophile antibody titre was 1:112 on August 26th. On September 16th repeat laboratory work showed an erythrocyte count of 4.74 million with 13.3 grams of hemoglobin, the leukocyte count 8,100, with 49 polymorphs, 41 lymphocytes, 7 monocytes, 2 eosinophils and 1 basophil. The sedimentation rate was 7 mm. in 1 hour. The heterophile antibody titre was 1:14. The electrocardiogram and the chest roentgenogram were essentially normal. The patient had gained 14 pounds, was in good health and attending school by this time.

Literature

As early as 1922, Longcope[1] noted premature ventricular contractions and inverted T-waves (lead not stated) in a 12 year old girl with Infectious Mononucleosis. It cannot be determined from the protocol of this case whether or not rheumatic fever was present.

In 1944[2], from electrocardiographic studies of 4,264 cases, 100 cases of partial heart block were described, one of which occurred in a patient with Infectious Mononucleosis.



Electrocardiograms taken on the first and last hospital days, and two months later.

Eleven cases of infectious diseases with alterations of the electrocardiogram were reported in 1945[3]. A case of Infectious Mononucleosis was presented with a precordial lead showing varying T-wave changes. The following year, a similar series of 13 cases of upper respiratory infections was reported[4], two of which were Infectious Mononucleosis. One case exhibited T-wave changes (in height), and the other demonstrated a varying P-R interval.

In 1946, Wechsler, Rosenblum and Sills[5] in reporting 556 epidemic cases of Infectious Mononucleosis performed electrocardiograms on 223 cases. Fifty-three patients, or 23% of the cases, showed abnormal tracings. These consisted of abnormal T-waves and prolonged P-R intervals; a combination of the two changes being present in only 6 patients.

Geraghty, in 1946[6], presented a 14 year old boy with Infectious Mononucleosis with no cardiac symptoms or signs other than a systolic apical murmur. Electrocardiograms were taken because of the murmur. T-wave changes (inversion) were noted over a period of three weeks to one month in three leads. He commented that if such changes had occurred in the course of acute rheumatic fever, they would be accepted as indisputable evidence of disease of the myocardium.

In 1948, electrocardiographic observations on 22 cases of Infectious Mononucleosis were reported[7]. The tracings were abnormal in 9 asymptomatic cases (41% of the series), with lowering or inversion of the T-wave being most common. Two cases showed prolonged P-R intervals. The electrocardiograms were abnormal as early as the fifth day of the illness.

In 1948, observations from electrocardiographic studies on 8 of a group of 43 patients with Infectious Mononucleosis, showed two that had abnormal tracings[8]. One patient, with pre-existing rheumatic heart disease had auricular fibrillation, and the other, with no history of heart disease, had elevation of the S-T segments in two limb leads during the illness.

Kalk found "myocarditis mononucleosa" in half of his 51 patients[9]. He noted lengthening of the Q-T interval and broad QRS complexes as well as increased conduction time, low voltage and some depression of the S-T segment in leads II and III.

In 1951, Bennicke[10] concluded from his observation of 166 cases of Infectious Mononucleosis that the electrocardiographic changes occurring in the acute phase of the disease did not vary from those seen in tonsillitis and were of the same transitory asymptomatic character.

Correlation of the clinical and laboratory findings, including electrocardiographic abnormalities, of symptomatic cardiac involvement in Infectious Mononucleosis is relatively rare in the literature. The following reports are of such cases.

Evans and Graybiel reported four cases of Infectious Mononucleosis with cardiac involvement[11]. In three of four patients involvement of the heart was detected after erythematous rash and joint symptoms. The electrocardiograms showed chiefly depression or inversion of the T-waves. Slight cardiac enlargement was present in one case, and a pericardial friction rub was present in another. The tracings returned to normal in six to 41 days in these cases. One case of Infectious Mononucleosis with pericardial effusion was mentioned in which rheumatic fever had been excluded.

In 1950, Boehm, Rose and Barnes[12] reported a patient with Infectious Mononucleosis who had transient substernal chest pain and two weeks later the electrocardiogram showed coving of the S-T segments with inversion of T-waves in Lead I, Avl, and the precordial leads. Within two months a normal tracing was seen.

DeFazio and Marsico[13], in 1951, reported Infectious Mononucleosis in a 42 year old man. He had chest pain, pericardial friction rub, cardiomegaly, and serial electrocardiographic changes consistent with a diagnosis of acute pericarditis.

In July 1953, Miller, Uricchio and Phillips reported three cases of acute pericarditis associated with Infectious Mononucleosis[14]. Each case had an upper respiratory infection with fever, sore throat, cervical adenopathy and malaise. In one case the respiratory infection preceded the pericarditis, and in the others, it followed. In two cases, transient elevation of the RS-T segments occurred with the acute stage, and in all, the subacute stage showed T-wave inversion. The heart was enlarged in two cases. The tracings returned to normal in approximately 30 days.

In August 1953, Soloff and Zatuchni reported one case of Infectious Mononucleosis with symptomatic cardiac involvement[15]. Chest pain was prominent, but no friction rub was described. For 5 months there were persistent T-wave changes and sequential ST-T changes. A transient upper nodal rhythm had also been noted.

In his monograph on Infectious Mononucleosis[16], Leibowitz included a 24 year old man with the disease who also developed acute pericarditis with effusion confirmed by roentgenogram and electrocardiogram. The patient made a full recovery over a period of several months.

Pathology

In spite of the increasing laboratory evidence of involvement of the heart, accounts of the anatomical changes have been limited because of the low mortality rate in Infectious Mononucleosis. Necropsies have been done on patients who died accidentally with a recent history of the disease or those who have died from its complications, e.g., splenic rupture and neurological involvement[17, 18, 19, 20, 21]. Jersild[22] in 1942, presented one patient with Infectious Mononucleosis who possibly died a cardiac death. This was a 25 year old man with symptoms of severe myocarditis. The electrocardiogram showed depression of the S-T segments in leads II and III. The patient died 8 days after the onset of symptoms and at autopsy the heart was described as showing no evidence of fatty change or thrombosis of the coronary arteries.

In 1948, Custer and Smith reviewed the pathology of Infectious Mononucleosis in 9 postmortem studies[23]. The heart was examined in 8 cases. They were unable to demonstrate pericarditis, but described a myocarditis with perivascular infiltrates of both normal and abnormal lymphocytes. These authors believed the cells to be metaplastic and to be formed in situ and stem from cells of the reticulo-endothelial system. They suggested that the lesions in the myocardium probably explained the electrocardiographic changes described in the disease.

It has been suggested that three possibilities for the production of pericarditis in Infectious Mononucleosis exist [14]: (1) The proximity of the hilar lymph nodes and extension of the infection into the pericardial sac, (2) Viral infection of the pericardium, and (3) the response of the pericardium as a shock organ to an offending allergen in a sensitive person.

Discussion

Miller, et al[14], in the discussion of the relationship of the cardiac findings in In-

fectious Mononucleosis believes that in view of the symptoms, clinical signs and electrocardiographic findings, that it is unlikely that the findings are coincidental. They mention, and Boehm, et al had previously suggested[12], that the small number of patients affected does bring up the remote possibility of the coexistence of two independent diseases—namely, acute idiopathic pericarditis and Infectious Mononucleosis. In the absence of positive diagnostic criteria for idiopathic pericarditis and in the presence of the specific sheep cell agglutination test for Infectious Mononucleosis, two separate diagnoses are not tenable at the present time.

Another possibility is that rheumatic carditis may result from Infectious Mononucleosis. In 1931, Bradshaw[24] reported mitral stenosis in a patient about 6 weeks after recovering from Infectious Mononucleosis. Consensus of opinion dispute the causal relationship here. That an exacerbation of a rheumatic infection can occur with a superimposed infection, cannot be denied.

The prognosis of the patient with Infectious Mononucleosis and symptomatic heart involvement appears good in the few cases that are reported. With the frequency of subclinical myocardial changes on the electrocardiogram, it has been suggested separately by Leibowitz[16] and Master et al[7], that the electrocardiogram be routinely done on all cases of Infectious Mononucleosis. They believe that the electrocardiogram may serve as an index to convalescence and resumption of activity. However, Houck[25] cautions that when minor electrocardiographic changes occur in Infectious Mononucleosis they may cause too much concern in both physician and patient and lead to unnecessary treatment.

Summary

A report of a case of Infectious Mononucleosis with evidence of cardiac involvement has been presented. A brief review of the literature of asymptomatic and symptomatic involvement of the heart in Infectious Mononucleosis is included.

Present address: University Hospital, Ann Arbor, Michigan.

ADDENDUM:

This paper was presented before the Regional Meeting of the American College of Physicians, Louisville, Ky., October 10, 1953.

Appreciation is expressed to Drs. J. S. Llewellyn, R. D. Wolfe, G. H. Rodman and P. J. Murphy for manuscript criticism; also to Miss E. Nolde, Medical Record Librarian, and Mr. Jack Hand, Department of Photography, of St. Joseph Infirmary, for their help in preparing the manuscript.

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An Alternating Consecutive Study of Vagotomy and Emptying Procedure Versus Subtotal Gastrectomy in the Treatment of Duodenal Ulcer*

A Report of 112 Cases

JOSEPH E. HAMILTON, M.D.
ALFRED M. BERG, M.D.
DAVID W. KINNAIRD, M.D.
ELLIS DUNCAN, M.D.**
Louisville

A rather heated controversy has arisen between the advocates of subtotal gastrectomy and those employing vagotomy plus an emptying procedure in the treatment of duodenal ulcer. Although majority opinion is against vagotomy for most situations, a number of surgeons in this country and England [1, 2, 3, 4, 5, 6, 7] still champion the procedure over gastrectomy for most duodenal ulcers. The recent report on a large series of both operations by the American Gastroenterological Association[8] and Grimson's Critique of this report[9] leave room for argument both ways.

Early in 1950 we decided to run a truly alternating and consecutive comparison between subtotal gastrectomy on the one hand and subdiaphragmatic vagotomy with an emptying procedure on the other.

Scope and Method of Study

Description of Series. The series includes all elective cases of duodenal ulcer regardless of degree of obstruction, electrolyte imbalance or recent hemorrhage, but excluding marginal ulcers, perforated ulcers and actively bleeding ulcers. It was started January 30, 1950 and is still in progress, although this presentation includes only cases up to January 30, 1953 in order to allow a follow-up period of from four years for the earliest to 12 to 15 months for the most recent. There are 56 subtotal gastrectomies and 56 vagotomies with emptying procedure. For sake of brevity hereafter, "vagotomy - emptying procedure" will be referred to simply as "vagotomy" but in every case both procedures were carried out—simultaneously 55 times and once in stages (gastroenterostomy first, then followed by supra-diaphragmatic vagotomy). Twice vagotomy was commenced but abandoned in favor of gastrectomy; once because of impossibility of exposure in a large obese subject and once because there was subacute inflammation and marked lymphadenopathy, at first suggesting neoplasm, around the gastric cardia, rendering search for vagal fibers very difficult. In both cases it seemed unfair to the patient to submit him to the extra surgery which neurectomy would have required. These deviations from the alternating pattern were corrected by performing vagotomies on the next two patients. No other vagotomies have been commenced and abandoned in this hospital's existence.

Unselected alternation of cases was assured by having the patients entered by a secretary in a chronological alternating list as they were accepted for transfer from the Medical Service and before final study and preparation for operation was begun.

After operation the great majority have been seen in Followup Clinic at least once a year and all but two have been contacted since February 1, 1954. The mother of one patient, now in Germany, answered her questionnaire satisfactorily. The other patient died in 1953 of coronary thrombosis, 14 months postoperative. He was up till death relieved of his ulcer. A few patients answered their questionnaire letter adequately for evaluation, the remainder were examined in clinic. When indicated, x-rays and secretory tests were obtained.

Preoperative Evaluation. As shown in Table I the two groups were evaluated preoperatively as to age, duration of disease, history of bleeding and/or perforation, and presence of significant obstruction. It will be seen that perforations occurred 23 times in the vagotomy group and only 11 times in the gastrectomy

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**From the Department of Surgery, University of Louisville School of Medicine and the Louisville Veterans Administration Hospital.

TABLE I

FACTORS IN BOTH GROUPS PERTAINING TO GRAVITY OF DISEASE OR SURGICAL RISK

Group	Average Age of Pts.	Duration of Disease	History of Bleeding	History of Perforation	Significant Obstruction
Vagotomy	41.8 yrs.	10.8 yrs.	27	23	28
Gastrectomy	44.03 yrs.	8.2 yrs.	29	11	25

group. If, as stated by Moore and associates[10], return of symptoms following perforation adds materially to the risk of the ensuing surgery, vagotomy had a significant handicap in this particular. In fact, three of the vagotomy candidates had perforated twice and one three times. The two groups appeared comparable in the other respects and also as to the incidence of physical defects that might add to surgical risk. In the vagotomy group old tuberculosis, emphysema, arteriosclerotic heart disease and hepatic cirrhosis were each present once. Among the gastrectomy candidates arrested tuberculosis was present twice (one of these a postoperative resection and thoracoplasty); arteriosclerotic heart disease occurred twice and unrecognized hepatitis and early cirrhosis occurred once.

Gastric Acidity and Secretion Studies. Determinations of the 12 hour gastric secretory volume and acidity, the acid response to insulin and to histamine were a part of the routine preoperative study of all patients, although in 24 of the total 112 one or more of the tests was omitted either because of the patient's condition or through inadvertence. Since the insulin tests were, until recently, continued for only one hour post injection, they are all subject to error on the low side, although this error is common to both groups. Analysis of the tests revealed no apparent prognostic value as to the favorable or unfavorable outcome of either operation. It is noteworthy that low fasting and 12 hour acidity readings seemed in no way prejudicial to a good vagotomy result. In fact three "Excellent" results occurred in patients with twelve hour acidity of 20, 3 and 33 clinical units and with fasting acidity of 2, 15 and 8 units and one "Good" result occurred in a patient with 12 hour acidity of 40 units and fasting acidity of 1 unit.

Operative Techniques. Procedures at this teaching hospital are of a deliberate, meticulous, cotton technique. The inner row of anastomoses is continuous 00 chromic, the outer row interrupted fine cotton. Two rows of cotton are used on the duodenal stump if closure is precarious. Ninety-five percent of the vagotomies and 82% of the gastrectomies were performed by the residents under staff supervision.

All but the staged vagotomy-gastroenterostomy, already mentioned, were subdiaphragmatic through the incision which seemed best suited to the case. After abdominal exploration, vagotomy precedes the emptying procedure in order that this extensive manipulation may be done in an uncontaminated field. The usual approach and rubber tissue retraction on the esophagus is used. After resecting the two main nerves the real search begins for small accessory fibers. As gently as possible the areolar tissue is partly excised, partly raked away with nerve hook from around the esophagus itself, from both diaphragmatic crura and down to the anterior aspect of the aorta. We are in complete agreement with Warren Cole[11] who replied, when asked how to be sure all vagal fibers were removed, that he knew of no sure way but he didn't plan any golf for that afternoon. If at the conclusion of the neurectomy the hiatus appears patulous, a stitch or two is taken to approximate the crura posterior to the esophagus and the divided peritoneum between cardia and under surface of the diaphragm is also loosely resutured. This precaution is taken because in our entire experience there has been one small non-troublesome hiatus hernia and another larger symptomatic one requiring repair. With each vagotomy an emptying procedure has been carried out: pyloroplasty 42 times and gastroenterostomy 14 times. In this small series no definite superiority can be ascribed to either method. Following pyloroplasty 38% of patients had an excellent result and 36% a good result, whereas following gastroenterostomy 71% had an ex-

cellent result and 7% a good result. Although without strong convictions, we are now doing gastroenterostomy in most cases.

The gastrectomies were performed in the usual manner, the anastomosis being nearly all of the Hofmeister type with two or three each of Polya and Billroth I. The estimated portion of stomach removed seems to be subject to large discrepancy and personal equation. However, of the 51 times when an estimate was made, under 70% was removed in 22 and 70% or more in the remaining 29. There was practically no difference in outcome of survivors between the two groups though the three operative deaths among gastrectomies occurred among the more extensive resections. Although little if any significance is ascribed to the above statistics, it at least appears that, if a lesser, easier resection is as yet not proven inferior in results, we favor for the present at least an approximate 65% resection unless unusual indications arise.

Results

Postoperative Complications and Hospital Stay. The average postoperative stay was 14.5 days following vagotomy; 15.4 days following gastrectomy. There were 10 postoperative hospital complications in the former group, nine in the latter. They are listed as follows:

Vagotomy

Pulmonary alone	2
Wound infection or hematoma	2
Wound infection, fecal fistula, pneumonitis	1
Wound dehiscence	1
Paralytic ileus with negative re-exploration	1
Thrombophlebitis	1
Lower nephron syndrome	1
Gastrointestinal hemorrhage	1
TOTAL	10

Gastrectomy

Pulmonary alone	1
Wound infection	1
Wound evisceration, duodenal fistula, atelectasis	1
Splenectomy for torn pedicle	1
Homologous serum jaundice	1
Postoperative vomiting, unexplained by G-I Series	1
Partial intestinal obstruction	1
Cystitis from catheterization in prostatic hypertrophy	1
Mild dumping syndrome	1
TOTAL	9

TABLE II

PATIENT REHABILITATION AFTER VAGOTOMY AND AFTER GASTRECTOMY

Degree of Rehabilitation	Vagotomy Patients	Gastrectomy Patients
Return to Regular Job or Its Equivalent	33	25
Partial or Complete Unemployment for Other Reasons than Ulcer	15	17
Working 3/4 Time	3	3
Working 1/2 Time	3	4
Less than 1/2 Time	1	3
Completely Disabled	1	1
	TOTAL 56	TOTAL 53*

*3 Post-Gastrectomy Hospital Deaths.

Rehabilitation. The degree of postoperative rehabilitation is outlined for the two groups in Table II. A good number of the patients in this series and especially those making a poor postoperative rehabilitation belong to the low income and poorly-educated class. Many have little incentive to resume full employment of a drudgery type and some of those with pensions, especially if unmarried, get by, living with relatives and working part time.

Seventy-three of the 112 patients were interviewed by the psychiatric department preoperatively, before the project had to be discontinued because of insufficient staff. All but 10 of the patients interviewed were found to have definite psychiatric disorders, such as "immaturity reaction," "somatization reaction," "passive dependency," etc. denoting conflicts, frustrations and maladjustment of the individual to home and society. This study has not yet been analyzed by the psychiatrists nor can it be said as yet how these findings compare to other groups or to the private type of patient.

Weight Change Related to Surgery. The weight change following vagotomy is compared to that following gastrectomy in Table III. There appears to be a tendency to greater weight conservation following vagotomy than following gastrectomy but this is not statistically significant. From the work of Zollinger[12] and others we would have expected a greater difference.

Postoperative Side Effects. The side effects associated with the two operations are presented in Table IV. There is little difference between the two groups except for the dumping syndrome which is more frequent following gastrectomy.

TABLE III

WEIGHT CHANGE FOLLOWING VAGOTOMY AND FOLLOWING GASTRECTOMY

		Vagotomy Patients			Gastrectomy Patients		
Rise or No Change		19	or	34%	12	or	23.1%
Loss Up to 10 lbs.		14	or	25%	13	or	25%
Loss 11-20 lbs.		16	or	28.6%	18	or	34.6%
Loss 21-30 lbs.		6	or	11%	5	or	9.6%
Loss over 30 lbs.		1	or	1.8%	4	or	7.7%
	TOTALS	56		100%	52*		100%

*3 patients died postoperatively. There was no data on the 4th.

TABLE IV

SIDE EFFECTS FOLLOWING VAGOTOMY AND FOLLOWING GASTRECTOMY

	Abdominal Pain Fullness, etc.			Diarrhea			Vomiting			Dumping		
	Mild	Mod.	Severe	Mild	Mod.	Severe	Mild	Mod.	Severe	Mild	Mod.	Severe
Vagotomy Patients	17	5	3	4	2	2	7	2	1	2	2	1
Gastrectomy Patients	17	6	2	9	4	0	6	3	3	8	3	3

TABLE V

PATIENT'S EVALUATION OF HIS HEALTH FOLLOWING SURGERY

Procedure	Well	Fairly Well	Unwell
Vagotomy Patients	32	20	4
Gastrectomy Patients	29	19	5

TABLE VI

PATIENT'S EVALUATION OF HIS OPERATION

Procedure	Near Perfect	Good	Fair	Poor
Vagotomy Patients	31	12	12	1
Gastrectomy Patients	31	14	7	1

Patient Evaluation of Operation and Recovery. The patients' own evaluation of their degree of recovery and of the success of their operation, as set forth in Tables V and VI is strikingly comparable in the two series.

Persistence of Definite Ulcer-Type Pain was complained of by eight post-vagotomy and five post-gastrectomy patients. Since such complaints are generally conceded to denote failure, they will be further discussed presently. One post-vagotomy and one post-gastrectomy patient each had a single brief attack of mild ulcer-like pain but have remained completely free both before and since. A recent G-I series on the former revealed no evidence of recurrence and the patient is completely well in every way. The latter has not yet been restudied. A second post-gastrectomy patient, completely well and rehabilitated and with negative G.I. series and with very low fasting acidity, has very mild epigastric discomfort, relieved by milk, during the four months that he is on night shift. We regard these three patients as cured of their disease.

Significant Postoperative Bleeding. This occurred three times definitely and one time questionably among the post-vagotomy patients; one time massively and three times questionably among the post-gastrectomy patients. Two of the three post-vagotomy bleeders have been rated failure, one with proven stomal ulcer, the other because of ulcer pain. The third patient was admitted in July 1953 with anemia of 2,100,000 and history of dark stools and epigastric fullness and nausea. He was drinking several beers a day. Two restudies including two G-I series and one barium enema have failed to reveal recurrent ulcer or any cause for bleeding. Now, 10 months later he has had no further symptoms and remarks, "I don't see how I could feel any better." He is regarded as an excellent result.

The post-gastrectomy patient was admitted to another hospital, given seven transfusions and re-explored. The surgeon reported, "bleeding from the stomach and scarring from gastro-enterostomy stoma." The anterior margin of the stoma was excised and reunited but without disclosing an ulcer. This patient is regarded as a probable recurrence. He still has severe side effects.

Final Evaluation of Operations. Table VII presents the final and most important evaluation of the two therapeutic groups. Writers in this field[1, 4, 13] have followed a uniform pattern for grading the results of surgery for duodenal ulcer and our criteria conform fairly well with theirs. They are as follows:

EXCELLENT: Free of all ulcer type symptoms or objective evidence of ulcer while on unrestricted diet and without medications. Side effects absent or very mild. Usual occupation.

GOOD: Free of ulcer symptoms or objective evidence of ulcer, but moderate persistent side effects of some type, which are not seriously disturbing. Works practically full time.

IMPROVED: Still partly incapacitated (side effects, weakness, nervousness, etc.) but no persistent ulcer pain and no objective evidence of recurrent ulcer. Patient himself feels he is definitely improved.

POOR OR FAILURE: Definite persistent ulcer type pain, or proven recurrent ulcer. Incapacitating side effects. Reoperation necessitated to revise the original therapeutic procedure.

The striking equality in therapeutic effectiveness of the two procedures in this Center is apparent. It is also apparent

TABLE VII

FINAL EVALUATION OF RESULTS OF VAGOTOMY AND OF GASTRECTOMY

Method	Excellent	Good	Improved	Failure
Vagotomy	27	15	4	10
Gastrectomy	25	15	6	10

that there are 10 failures in each group, or 17.9%, a higher rate than commonly reported. It seems worth while, therefore to analyze the "Failures" and also those patients only "Improved" following their operation.

Analysis of "Failures" and of "Improved" Results. Table VIII points up several facts. In the first place, *actual recurrent ulcer* was found only twice among the vagotomized patients and only once among the gastrectomized patients. Actually a second post-gastrectomy patient of this series is known to have a marginal ulcer but he was operated upon too recently to be included in the present study.

Persistent Ulcer Pain (Recurrence Unconfirmed). It will be observed that five vagotomy and four gastrectomy patients were forced into the "Failure" category by their insistence that they still had ulcer pain. All of the former and three of the latter have had repeat G-I series which failed to disclose an ulcer. Our roentgenologists freely admit that their studies do not definitely exclude active ulcers, especially in post-pyloroplasty patients, but the preponderance of evidence of the fluoroscopy and barium study was against recurrence. And conversely, there was positive roentgen evidence in all of three recurrences proven at operation. Three of the five post-vagotomy and one of the four post-gastrectomy patients with persistent ulcer pain are completely employed.

Among the technical failures, one post-vagotomy patient recently underwent surgical repair of a hiatus hernia which so far has relieved his ulcer-like symptoms. A second in this therapeutic group developed a large symptomatic pseudodiverticulum of the duodenum at the site of the previous Heineke-Mikulicz pyloroplasty. This necessitated subtotal gastrectomy. The post-gastrectomy technical failure consisted in partial obstruction of the efferent gastrojejunostomy loop which required gastrectomy at a higher level, though no ulcer recurrence was found.

Two patient with poor results following vagotomy were reoperated upon long enough ago for comment. One patient with stomal ulcer, underwent gastrectomy in June 1951 and upon recent interview still had ulcer type pain and other complaints which rendered his results a "Failure". The other patient with the symptomatic pseudodiverticulum of the duodenum was submitted to subtotal gastrectomy in May 1953 but still complains of sufficient side effects to place him in the "Improved" category. Here are two patients, then, that failed to do well after both procedures: vagotomy and gastrectomy.

Postoperative Mortality. There were three post-gastrectomy deaths and no post-vagotomy deaths in this small series. However, Table IX reveals that in our total operating experience since this hospital opened in April 1946, there have been only these three deaths in elective gastrectomy for duodenal ulcer and that there was one post-vagotomy death occurring in February 1954. One of the post-gastrectomy deaths resulted from acute hemorrhagic pancreatitis without demon-

TABLE VIII

ANALYSIS OF VAGOTOMY AND GASTRECTOMY FAILURES

Reasons for Failure	Vagotomy	Gastrectomy
Proven marginal or recurrent ulcer	2	1 (probable)
Persistent ulcer pain (Recurrence not proven)	5	4
Technical failures	2	1
Incapacitating side effects	1	1
Deaths	0	3

strable injury to either common duct or pancreatic duct; one death resulted from hepatic coma in a patient with previously unrecognized chronic hepatitis and early cirrhosis and the third death from bile peritonitis resulting from inadvertent transfixion of the common duct by a suture in a difficult duodenal stump closure. The single death among vagotomies, not, however in this series, resulted from inadvertent opening of the esophagus and postoperative leakage at the closure suture line.

Patients Rated "Improved." It will be recalled from reviewing Table VII that there were four patients rated "Improved" in the vagotomy group and six in the gastrectomy group. In all of the former and in all but one of the latter group, these less favorable results have been due to disagreeable side effects, as already shown in Table IV. The remaining "Improved" post-gastrectomy patient, 15 lbs. under his normal weight, although admitting to minimal specific complaints, still insisted that he was weak and nervous, had to eat often, and that his "food didn't give him strength" to work more than half-time at his farming. We wonder why this man, drawing a moderate disability allowance for service-connected ulcer, should not be doing considerably better than this?

Disability Compensation. Table X sets forth the incidence of pensions as related to degree of improvement following both operations combined. Whereas there is little apparent correlation in the case of pensions for other disabilities there is to be observed a highly significant inverse proportion between those doing well after either operation and those drawing service-incurred disability for duodenal ulcer. In short, only 33% of patients who

TABLE IX

OPERATIVE MORTALITY—PRESENT SERIES AND TOTAL SERIES

Series	Procedure	No. Operations	No. Deaths	Mortality
Present Study 1950 - 1953	Vagotomy	56	0	0%
	Gastrectomy	56	3	5.4%
Total Experience 1946 - 1954	Vagotomy	136	1	0.7%
	Gastrectomy	124	3	2.4%

TABLE X

PENSIONS AS RELATED TO POSTOPERATIVE RESULTS
(Vagotomy and Gastrectomy Combined)

Reason for Pension	Excellent	Good	Improved	Poor
Duodenal Ulcer (Service Incurred)	8 or 15.4%	11 or 36.7%	7 or 70%	10 or 58.8%
Other Disabilities	15 or 28.8%	10 or 33.3%	1 or 10%	4 or 23.5%
No Pension	29 or 55.8%	9 or 30.0%	2 or 20%	3 or 17.6%

obtained "Excellent" or "Good" results from their surgery received the disability allowance for ulcer while 77% of patients whose results were "Improved" or "Failure" were getting this compensation.

On first thought it might seem that the continuance of service-incurred ulcer pensions was only keeping pace with persistence of poor health following surgery. Nevertheless it cannot be denied that it is human nature to cling to such financial crutches, especially if one is of the inadequate, dependent type whose job itself may offer very little incentive to get really well. And on at least two occasions patients have indicated to their interviewer that they do not desire that their operation or an admission of improvement from it should jeopardize their pension.

Conclusions

In a previous comparative study of vagotomy and gastrectomy without the alternation of cases here employed and with a very short follow-up period we concluded that there was a slight advantage on the side of vagotomy-emptying procedure[14]. The present study is interesting in that there is no significant difference discernible in the curative effect of the two procedures. There remain, however, three advantages to vagotomy: It is definitely a safer procedure, it leaves the patient his stomach, and should ulcer recur following vagotomy, a conservative gastrectomy can be carried out much more safely than further resection for stomal ulcer following subtotal gastrectomy.

We are left in something of a quandary, since this study has not so far pointed out a reliable preoperative method of choosing between the two procedures and one would be ill-advised to conclude that the evidence arising from this small interim report indicates a complete swing to vagal neurectomy. Possibly the interesting studies of Shoen and Griswold[15] will furnish the answer to preoperative selection. In the meantime, we would lean toward vagotomy and an emptying procedure in the patient with moderate acid levels who finds it hard to maintain weight and strength or in those with dangerously extensive disease around the duodenum. Patients with extremely high acidity might warrant a combination of vagotomy and conservative gastrectomy. For the rest, there seems so far, no strong deciding factor other than the greater safety of vagotomy.

Summary

1. A preliminary survey has been presented of a consecutive alternating study of vagotomy and emptying procedure on the one hand and subtotal gastrectomy on the other extending from January 1950 to January 1953 and consisting of 56 patients treated each way.

2. The two therapeutic groups have been compared both from their preoperative composition and as to the postoperative results obtained and were found to be essentially similar.

3. The results in each group rated "Poor" and "Improved" were analyzed. Recurrent ulcer was proved twice following vagotomy and once following gastrectomy.

4. The possible influence of service-connected disability allowance for ulcer upon the ultimate outcome of surgery was considered as part explanation for the relatively poor postoperative showing of this group of patients.

5. The findings of this study present no clear guide to selection of the proper operation for duodenal ulcer except for the lower vagotomy mortality. In surgery there is no substitute for survival.

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The Management of Stones in the Urinary Tract*

HENRY S. HARRIS, M.D.

Bowling Green

Stones in the urinary tract represent a fairly frequent problem to most doctors. The diagnosis is easy in most cases and can be made fairly accurately by the general practitioner. Either colic or urinary infection may suggest the presence of stones which can be confirmed by the intravenous pyelogram. A few cases require retrograde pyleograms and kidney function tests to evaluate the true state of the urinary tract.

Removal of Stones

Stones in the urinary tract must be passed or removed if irreparable damage to the kidneys is to be avoided. All stones in the renal pelvis, with the exception of minute ones and large bilateral staghorn stones, should be removed by open surgery. Most ureteral stones a half centimeter or less in diameter will pass if given sufficient time. These small stones produce great pain in the patient and worry to the doctor because one can never predict when they will pass and at times they are difficult to visualize on the x-ray. In the lower third of the ureter they can at times be extracted through the cystoscope but the resulting trauma to the ureter, secondary infection, and in some cases failure to remove the stone, all go to make this method of treatment far from ideal. Male patients have often developed prostatitis following repeated attempts to extract a stone through the cystoscope. At the best one can expect the patient to be in the hospital a week and suffer considerable discomfort from catheter manipulation through the cystoscope. It is my policy at the present time to give generous amounts of sedation and antispasmodics to these patients with small ureteral stones. Their progress should be checked at frequent intervals by the x-ray. I have found the special attachment for the x-ray Bucky, in which three different exposures of a ureter in different positions of rotation can be made on one x-ray plate, very helpful in identifying small stones. If the stone does not make satisfactory progress or results in a complete obstruction to the kidney with severe pain and possible infection then it must be removed by the surgeon. If such a stone is above the pelvic brim it is best removed by open operation using a muscle splitting incision. The ureter is incised a short distance above the stone which is then either milked upward or extracted upward with a Johnson stone basket. Bougies are passed to dilate any stricture that may be present in the ureter. No attempt is made to suture the ureteral incision. The muscle incision is closed about a tissue drain which may be removed at the end of a week. Urine will cease to drain from the wound in seven to ten days. If the stone is located in the lower one-third of the ureter and will not pass then one may attempt extraction through the cystoscope. The first stage is to introduce a ureteral catheter past the stone into the pelvis of the kidney and leave it in this position for 48 hours. This permits the ureter to dilate and decompresses the kidney pelvis to make the patient more comfortable. At the end of this period a spinal anesthetic is given and the ureteral catheter is replaced by a long ureteral filiform to which a Johnson stone basket is attached. Careful passage of this instrument through the ureter will often extract the stone. Some of the stones will resist all effort at extraction and the surgeon then may take his choice of doing an open operation at once or waiting a few days to see if the ureter has been dilated sufficiently to allow spontaneous passage of the stone. If the stone is small and just recently lodged itself in the lower ureter then one can be almost certain it will pass after such manipulation. The inability to predict the precise day and hour when the stone will pass plus the desire of the patient to have the "stone in hand" will often argue in favor of a Gibson incision and removal by open surgery. Stones that are palpable on vaginal examination can often be removed through the vagina rather easily by an incision lateral to the cervix.

Stones in the bladder, if small, will often be voided. Large stones are usually the result of bladder neck obstruction or the presence of foreign bodies. Those up to the size of a golf ball can be crushed and removed by the modern lithotrite. Any bladder neck obstruction should be corrected at the same time. Extremely large bladder stones should be removed

*Read before a meeting of the Sixth Councilor District of the Kentucky State Medical Association, June 8, 1954, Bowling Green, Kentucky.

by cystotomy. Prostatic stones are often associated with chronic prostatitis and while the stones themselves rarely give trouble the accompanying prostatitis is among the most difficult conditions that we are called upon to treat. Bladder neck irritation, burning, and perineal pain often persist after complete removal of the stones and gland.

Causes of Stones

Now, once stones are removed, how do we prevent future stone formation? The causes of stones in the urinary tract are not well understood. We do know certain conditions that predispose to the formation of calculi. Probably the most common condition associated with stones is obstruction. Strictures, any place in the urinary tract, from the calyx to the meatus, which interfere with the free flow of urine may be responsible for stone formation. So it is obvious that all obstruction should be removed. A common example is the prostate obstructing the neck of the bladder. Yet it is a strange fact that many obstructed urinary tracts do not develop stones. Another common cause of stones seems to be the presence of a foreign body. The urine is a solution of salts at all times and one need only to recall the fate of a foreign body in the bladder such as an indwelling catheter for several weeks, to realize that any nucleus will invite a prompt coating by urinary salts. We have evidence that in addition to gross foreign bodies introduced into the urinary tract there may be deposits of salts about particles of pus or bacteria in case of urinary infection. So it would seem that all foreign bodies and infection must be kept out of the urinary tract if stones are to be prevented. Many infections have the additional evil influence of shifting the pH of the urine to the alkaline side which renders the phosphates less soluble and more likely to precipitate. So in all cases one must try to correct obstruction, remove foreign bodies, and clear up infection.

Prevention of Stones

Now, from a practical standpoint, I divide my cases of stones into two groups for future consideration. The first group and the largest may be referred to as "first timers". These are the people that for no good reason seem to pass a small burr like calculus down the ureter for the first time in their life. Complete survey of the urinary tract is negative or at most a mild prostatitis found. If analysis is carried out on the stone it will usually be found composed of calcium oxylate. These seem most common in men and often are preceded by a state of general dehydration. This group I do not feel need to be put on any program for future prevention of stones. Most of them do not have future attacks. The second group either has multiple stones or recurrent formation of stones. It is this group that we must investigate further and outline a definite plan of stone prevention. One will want to know the following details about this group of stone formers:

(1.) Is the blood calcium and phosphorus normal? Occasionally a high calcium and low phosphorus will indicate hyperparathyroidism which causes large quantities of calcium to be excreted by the kidney and subsequent stone formation. Treatment of this condition is directed toward the parathyroid adenoma and not the urinary tract.

(2.) What is the infection and reaction of the urine? It is important to determine the reaction or pH in which the stone was formed. Many types of infection will break down the normal urea in the urine into ammonia and keep the urine in a constant state of alkalinity which cannot be changed to the acid state by the ingestion of acid salts.

(3.) Is the stone composed of metabolic salts such as cysteine or uric acid? If so, the condition is best treated by alkalinization of the urine with sodium citrate in the dose of one teaspoon full four times daily. Uric acid and cysteine are insoluble in acid urine and probably not influenced by diet. Often the stones are not opaque to x-ray. A low calcium diet is given to prevent calcium phosphate stones from forming in the urine that has been rendered alkaline.

(4.) Is the stone composed of calcium or a mixture of calcium oxalate and calcium phosphate? These stones are prevented by a low calcium, acid ash diet plus sodium acid phosphate in the form of tablets. These salts are not precipitated in the presence of an acid urine because they are more soluble.

(5.) Is the stone composed of magnesium ammonium phosphate? These stones are due to urea splitters and are best treated by an acid ash diet and sodium acid phosphate if one can get the urine acid. Often times it is impossible to acidify the urine and then one must not give sodium acid phosphate as this only increases the amount of phosphate present for precipitation. It is in this type of case that alum-

inum hydroxide in the form of Baseljel and a low phosphate diet is useful in treatment. Baseljel ties up the phosphorus in the bowel and does not permit it to be absorbed so that there is less to be excreted in the urine.

Several years ago, Dr. Arthur Butt of Pensacola, Florida discovered that a cloudy urine could be cleared by giving hyaluronidase hypodermically. Hyaluronidase (one trade name for it is Wydase) in some cases seems to act as a protective colloid which holds the salts in solution in the urine and does not allow them to precipitate. The value of this form of treatment is not known at the present time and while many people have been very enthusiastic about its use to prevent further stone formation, it has been pointed out in the literature that a few cases are sensitized by this drug and seem to precipitate the salts more rapidly than if it were not given. It has also been pointed out that under the ultra microscope a clear urine may still be in a state that will precipitate salts and does not necessarily protect the patient from stone formation.

Dr. Edwin L. Prien of Boston, who has done some of the most fundamental research on stone formation in the urinary tract, has done much to influence our thinking in regard to the prevention of stone formation. His excellent papers on medical management of stone forming patients are filled with useful and practical suggestions. He points out that in all stones the patient can develop a habit of drinking large quantities of water, thus lowering the concentration of the urinary salts and discouraging their precipitation. For those patients with calcium stones he suggests that the omission of all milk and milk products except butter is a very practical and effective way to reduce the calcium output of the urine. Dr. Prien notes that the elimination of milk products and the giving of sodium acid phosphate in the form of tablets to acidify the urine is a regime much more likely to be followed by the patient than the use of complicated acid ash and low calcium diets with their long lists of forbidden foods.

Summary

In summary we might say that unexplained abdominal pain or pyuria should lead to an investigation of the urinary tract with pyelograms. When stones are demonstrated, they must be removed in most instances if further damage to the urinary tract is to be avoided. Multiple stones or recurrent stones require further investigation into the chemical composition and state of the calcium metabolism so that a definite program of stone prevention can be outlined to the patient. Practical suggestions for the removal of stones and prevention of their formation in the future have been discussed.

Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

All scientific material appearing in the Journal is reviewed by the Board of Consultants on Scientific Articles. If illustrations are submitted with a paper, the Journal will assume the cost for the first three one-column width half tones. The cost of additional illustrations will be borne by the essayist.

Arrangements for reprints of an article should be made directly with the publisher of the Journal, Mr. J. G. Denhardt, Times-Journal Publishing Company, Bowling Green, Kentucky.

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CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

A Case of Acute Myocardial Infarction

Case No. 121117

Presentation of the Case

A sixty-three year old white male entered the hospital on September 29, 1954, with the complaint of chest and left shoulder pain.

The patient had been feeling well recently, but while preparing dinner the day of admission he experienced pain which was first noted across the upper chest anteriorly and which radiated to the left shoulder. The pain was constant, severe, and most intense in the left shoulder joint and in the region of the left scapula. The pain was accompanied by profuse generalized sweating and by a "tingling sensation" over the entire body. Shortly after the onset of the pain the patient became markedly dyspneic. He was brought to the hospital and immediately given oxygen and morphine. The pain and dyspnea persisted for two to three hours and gradually subsided. Vomiting occurred several times after arriving in the hospital.

Past history revealed the patient had been in good health until eight years ago when he developed dyspnea on exertion, followed by orthopnea and pedal edema. He was treated by a physician for heart trouble until 1951, when he was first seen in the Medical Clinic of the General Hospital. A diagnosis of hypertensive cardiovascular disease was made. Blood pressure at that time was 220/130 and left ventricular enlargement was noted. The patient was maintained on digitalis, low salt diet and mercurials. In 1952, he developed auricular fibrillation and an effort to establish a regular rhythm with large doses of quinidine was unsuccessful. ECG at this time showed auricular fibrillation and right bundle branch block. (Fig. 2)

Physical examination at time of present admission showed an obese, well preserved man who was restless, anxious, dyspneic and sweating profusely. B.P. was 170/130. Heart enlarged to left, totally irregular rhythm and no murmurs; two plus pitting pedal edema. The remainder of the examination was negative. Diagnosis on admission was hypertensive - arteriosclerotic cardiovascular disease, acute myocardial infarction, generalized cardiac enlargement, predominately left ventricle, auricular fibrillation and left and right sided heart failure.

The urine had a specific gravity of 1.019 and gave a one-plus test for albumin. Examination of the blood revealed a leucocyte count of 19,700 with 69 percent neutrophils. Prothrombin time was 15.8 seconds, control 13.8 seconds; percent of nor-

Figure 1

Chest X-ray taken 16 Jan. '53. Marked enlargement of the cardiac silhouette with a heart-chest ratio of 20-33 cm. The enlargement appears to be mainly left ventricular. There is some increased prominence of the bronchovascular markings throughout both lung fields as well.

mal 73. Serological test for syphilis was negative. ECG revealed a slow auricular fibrillation, right bundle branch block, and S-T changes consistent with acute antero-lateral myocardial infarction. (Fig. 3).

Differential Diagnosis

DR. J. MURRAY KINSMAN: Here we have a man who has been known to have had hypertensive cardiovascular disease for eight years. The distribution and character of the pain in the present illness immediately suggest acute myocardial infarction. However, when the patient was first seen, certain other possibilities must certainly have been considered. In a hypertensive with this kind of pain we would also consider a dissecting aneurysm; however, the patient did not develop any of the findings which would suggest an aneurysm. Among those would be the disappearance of peripheral pulses, marked widening of the superior mediastinum by physical examination or by X-ray, the appearance of an aortic diastolic murmur, and the radiation of pain into the back, abdomen or legs. Acute non-specific (benign) pericarditis may simulate myocardial infarction; in this condition there is almost always a preceding history of an acute upper respiratory infection, and usually a pericardial friction rub becomes audible early. Pulmonary infarction, too, may produce a similar picture; X-rays of the chest usually establish or rule out this possibility. On rare occasions prolonged coronary insufficiency without myocardial infarction may produce symptoms similar to this patient's. However, in this patient as is true in most instances, later developments—leucocytosis, the increased sedimentation rate, and the progressive electrocardiographic changes—made the diagnosis of myocardial infarction quite clear.

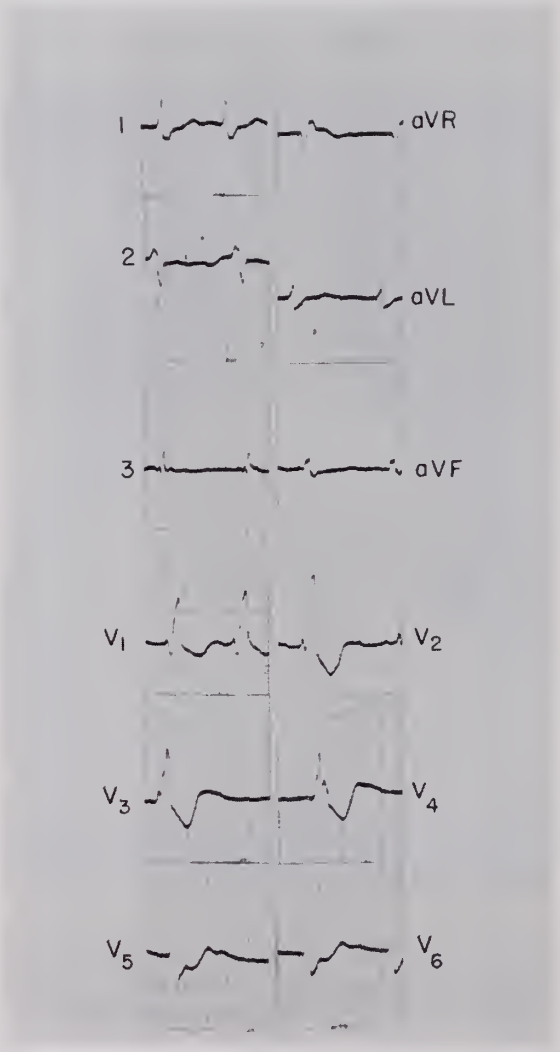

Figure 2

ECG taken 28 Jan. '52. Right bundle branch block. Auricular Fibrillation.

In this discussion, we will concentrate chiefly on the management of the case and since the patient was on Dr. Coe's service, I will ask him to describe the therapy which was actually used and to answer any questions that may arise regarding the treatment.

Management

DR. WALTER S. COE: This patient was put to bed after he had been given intramuscular morphine. Oxygen was given by nasal catheter. The pain subsided in about three hours but the dyspnea persisted until the following day. Oxygen was continued during this time. Following the determination of the control prothrombin time the patient was given 150 mg. phenindione (Hedulin) and this dose was repeated the next morning. Daily prothrombin times followed and an average dose of 100 mg. Hedulin was found to keep the prothrombin time in the therapeutic range. The maintenance dose was divided into 50 mgm. in the morning and 50 mgm. at bed time. The patient was on a maintenance dose of digitalis at time of admission and was continued on such dose. He was placed on a low salt, low calorie diet and allowed fluids as desired. Elastic stockings were applied the day following admission and he was allowed to sit up in a chair at bedside on the fourth hospital day.

QUESTION: Why was the oxygen given by nasal catheter rather than a tent?

DR. COE: The tent has the advantage of offering a cool environment during hot weather. However, with the nasal catheter a higher concentration of oxygen is obtained. With a mask an oxygen concentration of 95 to 100 percent is obtained; with the nasal catheter, properly placed, a concentration of 60-65 percent and with a good tent operating at 6 to 8 liters per minute a concentration of 45 to 55 percent may be expected.

QUESTION: Why was Hedulin used rather than Dicumarol?

DR. COE: For the most part a doctor should use the anti coagulent with which he has had the most experience. Hedulin (2-Phenyl-1, 3-indandione) does cause a more rapid fall in prothrombin and a more rapid recovery as compared with dicumarol. There is some evidence that the action of Hedulin is more uniform than dicumarol. In this patient there was no difficulty in maintaining the prothrombin concentration between 20 and 30 percent.

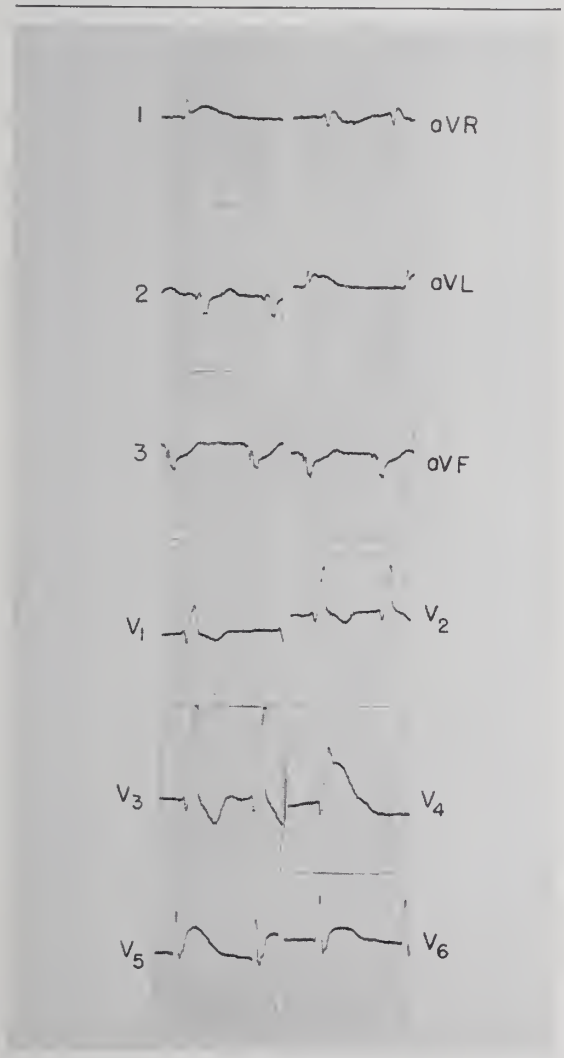

Figure 3

ECG taken 29 Sept. '54. '54 Right bundle branch block. Auricular fibrillation. ST elevation suggests acute antero-lateral infarction.

QUESTION: Should cases of mild infarction be placed on anticoagulants?

DR. COE: A number of recent reports have stated that the anticoagulants are not indicated in the mild case of infarction. This opinion is based on the very low mortality rate in the mild cases plus the known hazards of anticoagulant therapy. The studies conducted by the American Heart Association indicated that the percentage of good risk cases dying was below 2 percent in both the control and in the anticoagulant treated group. However, thromboembolic complications in these same cases remained at the high level of 29 per hundred cases, in the control group as contrasted with 9 per hundred in the treated group. This evidence indicates that all cases of acute myocardial infarction should receive anticoagulant therapy unless there is some specific contra-indication.

QUESTION: In order to prevent ventricular arrhythmias shouldn't all patients with infarction be placed on quinidine?

DR. COE: It is our opinion that quinidine should not be used as a routine measure in myocardial infarction. The reasons for this are that quinidine will occasionally produce nausea, vomiting or diarrhea and may occasionally cause an undesirable fall in blood pressure in acute infarction. When frequent extra systoles make their appearance quinidine may be given in doses of 0.2 to 0.4 gm. every three to four hours. Procaine amide hydrochloride is also effective with ventricular extra systoles and paroxysmal ventricular tachycardia.

QUESTION: Why isn't nitroglycerine used to increase coronary blood flow in a case of this kind?

DR. COE: Nitroglycerine is contraindicated in the patient with acute infarction as it may cause a marked fall in blood pressure.

QUESTION: When is digitalis indicated in a patient like this one?

DR. COE: This man was in a mild degree of failure on admission and was already on digitalis so was continued on a maintenance dose. Mercurial diuretics and restriction of salt will often control the mild congestive failure accompanying acute infarction. The patient with more than mild congestive failure should be digitalized.

Patients with rapid ventricular rates due to auricular fibrillation or auricular flutter should be placed on digitalis. Since digitalis may produce all sorts of arrhythmias and, in addition, occasionally undesirable gastrointestinal effects, it should not be used in the patient with acute infarction unless definitely indicated.

QUESTION: What sort of diet was ordered for this patient?

DR. COE: A 1000 calorie, low salt diet was ordered. It has been found that a moderate size meal will call for an increased cardiac output amounting to as much as 30 percent. Therefore it is advisable to avoid large bulky meals in the acute phase. Fluids should be encouraged by mouth in order to keep up a daily urinary output of 1,500 cc. The bowels can be ignored for the first two or three days. Mineral oil in doses of 30 cc. daily will usually prevent constipation. In any event we must prevent the patient from straining at stool. Except in the critically ill case a bedside commode is usually more satisfactory than a bedpan.

QUESTION: Why were the elastic stockings used?

DR. COE: The use of elastic stockings for the more seriously ill patient and those with cardiac failure is advisable in order to prevent stasis in the veins of the legs and thrombosis as a result of that stasis. Passive leg exercises are also worthwhile in preventing thromboembolic complications.

QUESTION: Why wasn't atropine given with morphine?

DR. COE: It probably should have been. Atropine will minimize the gastrointestinal effects of morphine and it has been shown to reduce the mortality rate in myocardial infarction produced experimentally.

QUESTION: Why was this patient allowed to sit up in a chair on the fourth day?

DR. COE: The work of the heart needs to be kept at a minimum during the healing process that follows acute infarction. However, this doesn't necessarily mean confining the patient to flat in the bed. If there is no shock accompanying the infarction and no cerebral ischemia the patient may be allowed to sit in a comfortable chair within three to four days following the acute attack. This does not mean early ambulation. The patient should be helped in and out of the chair. We have some evidence that the heart has less work to do with the patient in the sitting position as compared to the supine position. There are other advantages to allowing the patient to sit up in an armchair. Some of these are: fewer bladder and bowel complications, a more optimistic attitude by the patient, and the prevention of pulmonary congestion.

QUESTION: How long does it take for a myocardial infarction to heal?

DR. COE: A number of men have attempted to answer this question. Mallory and his co-workers found that following coronary thrombosis necrosis in the myocardium does not become evident for five to six hours. At this time the muscle fibers become hyaline, the striations become less evident and there is a disintegration of the nuclei. Infiltration with polymorphonuclears begins in about five hours, starting at the edges of the lesion and spreading centrally. It is present in the interstitial tissue and about the blood vessels and gradually extends into the necrotic tissue. Beginning on the fourth to sixth day new blood capillaries grow into the infarcted area and at the same time fibroblasts are seen. It is also at this time that macrophages invade and phagocytize the necrotic muscle tissue. In general it takes about two months to have all of the necrotic muscle fibers removed. Collagan which is produced by the fibroblasts appears first at twelve days and is maximum in about eight weeks. Intercoronary collateral channels develop within ten days and progressively increase. There usually is a firm scar which becomes contracted at the end of six weeks.

QUESTION: What was this patient's course in the hospital?

DR. COE: This man developed no complications and got along well. He remained in the hospital four weeks. He is now ambulatory at home but will not return to work for another two months.

SPECIAL ARTICLES

DISABILITY INSURANCE FOR PHYSICIANS—FACT AND PHILOSOPHY

Editor's Note: This informative discussion of disability coverage for physicians was written by a veteran and highly respected member of the insurance fraternity at the request of the Journal; Views expressed herein however, are the author's and do not necessarily reflect the official attitude of the Kentucky State Medical Association.

Time is the professional man's greatest asset, particularly so if he has many years of practice ahead, and *Disability* his greatest potential loss. Therefore, adequate and sound disability insurance is of utmost importance to the physician.

Because disability insurance is so often misunderstood and because until quite recently it has been less regulated and supervised by state insurance departments than any other field of insurance, it probably could be more carefully purchased. Life insurance and property insurance have long been well regulated and supervised, but because of the relatively small volume of disability insurance sold until quite recently it has been ignored and left to grow up like a step-child.

Physicians may have purchased disability insurance in substantial amounts without due regard to their individual problems and without understanding clearly what they have bought. Their judgment has too often been concerned with the amount of insurance and the premium rather than the terms and provisions of the contract. The real value or lack of value is not easily apparent. There are many ways an insurance policy can appear to offer the moon and yet offer very little realistic protection. The busy doctor seldom reads the policy contract closely and the writers of disability policies are expert at making them attractive.

In recent years the growth of disability insurance has been so rapid that legislation and supervision have been directed toward it and it is now more difficult for companies to disguise real meaning in clever phraseology. Nevertheless, it is still possible to buy insurance which does not give the protection the buyer thinks he has. From now on such disappointments are going to be the result of the buyer's carelessness rather than due to any misrepresentation on the part of the company or agent. For no longer can the benefits be printed in large type and the restrictions in fine type. However, all types of policies can still be sold. So it is well to understand these types and the chief differences.

Basically there are two main classifications: (1) Individual policies and, (2) Group policies. These can be further classified as follows:

1. Cancellable Policies—These can be cancelled at any time but without prejudice to an existing claim. The chief advantage of this type policy is the relatively low premium. It may be in force when the big claim comes and it may not. The tip off to a big, expensive claim is often a minor one. Under this type policy the insuror can escape the big claim that may follow the small one by cancelling the policy after settling the small one.

2. Non-Cancellable Term Policies—These cannot be cancelled during the term for which a premium has been paid, but the option of renewal rests with the company. This contract has little advantage to the insured over the outright cancellable policy, for the insured has no guaranteed right of renewal. At the end of the year or quarter for which premium was paid the company can decline renewal. This policy also has a low premium

3. Non-Cancellable, Guaranteed Renewable Policies—These policies give the insured the guarantee of renewing until a specified age—usually age 55, 60 or 65. Obviously, the longer the guarantee the greater the risk so the greater the premium. There is comparatively little of such insurance in force because this type of insurance is relatively new. Only a few companies write it and still fewer have been writing it longer than 5 years. The primary value of this form of policy is that the insured OWNS it. It cannot be taken away from him if the company decides it made a mistake in issuing the policy or if the insured becomes a poor

risk. This type policy can be on a level premium basis or on an increasing premium basis going up with age of the insured.

GROUP POLICIES are all in the *cancellable class* but this fact is not generally understood. Individuals in the group cannot be cancelled, but the entire group or certain sub-groups, depending on the master contract, can be cancelled at any time by the company, or the company may refuse to renew. There are two types of group policies—(1) Those where the employer-employee relationship exists, and (2) Those where only a common classification exists, such as being members of the same occupational organization.

The basic advantage of group insurance is social. The individual does not have to qualify on his own merit. The poor risks are carried along with the good risks at an average premium. There is some savings in expense because of volume but this is largely eliminated because of loss of selectivity. In any field of insurance, if you don't have selectivity claims will be excessive and thus costs will be greater than where selection is made. This fact is not debatable. That is why the termination clause is in every group plan. The insurance company retains the right to quit.

Group insurance works best where the employer-employee relationship exists because there is automatic selection in favor of the insuror due to the fact that most firms employ young and healthy workers, and retire older workers. Also, because the employer pays part of the premium, the insurance is still a bargain for the young and healthy person. He is paying less than an average premium for an average risk. In the association group plan these facts do not exist. There is a tendency for the younger and better risks to wise up and get out of the plan, thus leaving it loaded with the poor risks. As a result the plan may be cancelled.

Policies can be further classified as to (1) definition of disability, and (2) term of payment. There are three definitions of disability, listed here in order of advantage to the insured:

1. Inability to engage in one's regular occupation.

2. Inability to engage in any gainful occupation.

3. Inability to engage in any occupation for remuneration or profit. The value here is easily recognized if the policy is read.

TERM OF PAYMENT means the period for which benefits are payable in accord with other provisions of the contract. While most companies will issue lifetime benefits for accident, it is unlikely that any policy will provide sickness indemnity for more than ten years unless there are other limiting features that make this benefit almost impossible to receive.

Other provisions which should be carefully noted are these:

THE INCONTESTABLE CLAUSE protects the insured in later years by waiving the company's right to contest a claim because of a misstatement of fact in application. Without this clause a cloud always hangs over the validity of the policy, for the insured is held responsible for inadvertent inaccuracies and omissions in the application for insurance as well as for deliberate attempts to deceive.

THE PRORATING CLAUSE gives the company the right to deny or reduce indemnity payments due to a change in occupation or if the insured is doing any act or thing pertaining to a different occupation. For example, a physician who owns a farm may be seriously injured while doing some chore. The presence of this clause may prevent or greatly reduce any payments under the policy.

THE HOME CONFINEMENT CLAUSE should be carefully read. Many sicknesses have very short acute stages with prolonged recuperative periods. These recuperative periods are seldom house-confining. Therefore, policies which limit benefits, or deny them, unless the insured is confined indoors, have little real value. Some policies promise lifetime benefits for sickness but further state "unless the insured is continuously confined indoors such indemnity is limited to—" (This may be one month to twelve months, or it may reduce the monthly indemnity).

AVERAGE EARNINGS CLAUSE—This is sort of the reverse of a co-insurance clause in fire insurance. If your average earned income for a stated period is less than the insurance, or less than a stated percentage, the benefits are reduced accordingly. A physician who has eased up in his work to avoid serious disability may find that because of this clause he has very little protection.

OTHER INSURANCE CLAUSE—The mere fact that you have bought other insurance and have failed to notify the company whose policy contains such a clause may reduce considerably the payment of benefits under this policy.

Very likely a sound and adequate program for the average successful doctor

will require some of each of the above types of coverage. The total amount of long term guaranteed renewal insurance is quite limited, so you will need also some cancellable coverage. And, aside from the fact the premium is low, you may wish to participate in your association's group plan for its social value. For it makes possible some protection for the older members and those who cannot qualify on an individual basis. However, keep in mind the premium is not low because doctors are select disability risks or because of any magic in the group idea, but rather because the *company can quit* whenever it chooses. The premium on a group of insurance agents under the same terms would be just as cheap.

Analyze your need. Plan your program accordingly. Read the policy *before* you buy.

THE MILITARY PICTURE FOR EARLY 1955 AS IT PERTAINS TO YOU*

As the stock brokers repeatedly say: "The information contained herein has been obtained from sources believed to be reliable. It does not, however, purport to include all the information available . . . . but is merely presented for informative purposes." Sources of information in this report to a large extent are: The Selective Service System and the AMA Washington Letter.

Large Doctor Draft Call Issued

More than twice the number of men taken in the December Doctor Draft call will be tapped for April induction, the Defense Department announces. This is presumably the last medical officer call under the present Doctor Draft Act, which is scheduled to expire on June 30, 1955. The Defense Department has asked Selective Service for 1,275 physicians—825 for the Army, 200 for the Navy, and 250 for the Air Force—and 459 dentists for the three-month period starting next April.

The last quarterly Doctor Draft call, issued for December, took 550 physicians and 150 dentists. Priority III men (doctors not educated at government expense who have served no time on active duty) will comprise the majority of those taken in April, the Defense Department says. It is possible that the Priority III physicians will be taken from the years 1932 through 1915 (ages 22-39). As yet Kentucky has not been allocated its quota for the March call.

Younger physicians should not be alarmed upon receiving a call for physical examination while interning. As yet no interns have been called for induction, but it is considered advisable to have doctors examined in order that the physically disqualified physicians may make plans to enter residency or practice without interruption.

Selective Service Surveying Medical Manpower Pool

Selective Service has launched its most extensive survey of medical manpower. Headquarters hopes to have on hand by early 1955 the following important data: (1) total number of living registrants under the regular draft who are either physicians or dentists, and (2) numbers in each regular Selective Service classification. Armed with this data, Selective Service will be prepared to answer questions expected to come from Congress when it takes up the extension of the regular draft and what to do about the Doctor Draft, both of which expire next June 30. The information also will help the Defense Department to decide how many of the approximately 1,900 physicians who will be completing their internships next June to defer for residencies (1,325 have requested such deferment). Officials are concerned that many non-veteran physicians have delayed joining the Defense Department's Commissioning Program on the theory that the Doctor Draft will be allowed to die and they will have no further obligation.

Assuming that the Regular Draft will be extended, they will have a two-year obligation under that law, an obligation which must be served before their 35th birthday. Unless they sign up for a commission in one of the medical corps they might have to serve the two years as enlisted men, like other registrants. Congress has made it clear that men brought in under the Doctor Draft are to be offered commissions, but this guarantee does not apply to the regular draft.

*By A. Clayton McCarty, M.D., Louisville, Chairman of the Kentucky Advisory Committee to Selective Service.

Defense Studies Continuation of $100 Equalization Pay

Among legislative proposals under study by Defense Department is continuation of the $100-a-month additional pay for physicians and dentists coming into the services under the new medical officer commissioning program after next June. The bonus pay provision is part of the Doctor Draft Act which is slated to expire next June 30.

As now contemplated, this extra pay would be applied only to those physicians and dentists who sign up for more than the minimum two years. This would be in line with the Strauss Commission report of March, 1953, on pay for the armed forces. It advocated the $100 be limited to doctors willing to serve on a career basis or for periods of duty longer than required of citizens generally. Those on active duty June 30, however, will continue to receive the $100.

Meanwhile, Defense reports that about 1,900 non-veteran physicians who will complete their internships next June have indicated interest in the new commissioning program. Of these, about 1,325 asked consideration for residency deferments. The remaining 525 said they would be ready to take commissions and go on active duty some time after June. An as yet undetermined number of the 1,325 will be given deferments by lot, the results of which are to be announced in early 1955.

Medical Council Named to Advise Army on Reserves

Army Surgeon General George E. Armstrong has announced formation of a council of five general officers from the Army Medical Corps Reserve. The council will advise him on special reserve matters "having far reaching impact on the health professions of the nation as well as on those problems concerning the general activities of the Army's medical reserve." It will meet each spring and fall on such problems as procurement of reserve personnel, utilization of professional reserves, and promotion of closer relationship between military and civilian medicine. Members are Brig. Generals Perrin H. Long, College of Medicine, State University of New York; Alexander Marble, Joslin Clinic, Boston; I. S. Ravdin, University of Pennsylvania School of Medicine; Harold G. Scheie, University of Pennsylvania Graduate School; and Frank E. Wilson, director of AMA's Washington Office.

Kentucky Cooperation Continues Fine

Cooperation among the Kentucky doctors has again made it possible to carry on the work of the Advisory Committee in a pleasant and satisfactory manner. Many physicians who should not be called into service at this time have been protected, and others whose services are needed in the military department have been called for this duty. It is felt in most quarters that the Doctor Draft will be continued after July 1, 1955, but most military service requirements will be taken care of by recent graduates and those finishing their internships. Inquiries in any connection are welcome by writing to 1414 Heyburn Building, Louisville 2, Kentucky, or calling Clay 5555. Colonel Solon Russell or Major Samuel Hicks at the State Headquarters for Selective Service, 1405 West Broadway, WAbash 7336, and/or Kentucky Military District, Nichol's Hospital, FRanklin 1741, also stand ready to be of help in any way possible.

The JOURNAL of the
Kentucky State Medical Association

Issued Monthly Under the Direction of the Council

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EDITORIALS

A SMALL FAVOR—THAT MEANS MUCH

The keystone of organized medicine is the County Medical Society. The key man in your County Medical Society is your Secretary. In a large measure the degree of accomplishment of the County Medical Society is the result of the work of the Secretary. He needs your cooperation.

This fact was recognized by the House of Delegates of the Kentucky State Medical Association several years ago, when a resolution was passed calling on the County Societies to carefully choose their secretaries and to retain them in office for a period of three years. The rationality of this has been proven by the fact that those county groups accepting the theory have found it most worthwhile.

An important way to render effective support to your county medical society and its secretary is to pay your county, KSMA, and American Medical Association dues early. For your secretary, like you, is a busy man, and like you has a living to make. Willingly, he is giving freely of his time to your society to benefit you and the people you serve. You can make it easier for him by paying your 1955 dues promptly, and as willingly as he gives his time.

"WE ARE CITIZENS, TOO"

With one political party in control of the legislative branch of government in Washington, another in control of the administrative branch, with a presidential election coming up in 1956, and with the ever increasing interest of many misguided persons in political "solutions" to essentially non-political health problems, every KSMA member will experience a strong stimulus to bring into play his own capacity for watchfulness and active responsibility in government affairs.

The Republican controlled 83rd Congress saw a total of 407 bills of "medical interest" introduced, 157, or 60 per cent, more than the 250 bills of like kind introduced during the last Democratic controlled 82nd Congress. What we can expect of the 84th Congress with divided control and the politician's eye on the presidential election is a question for our serious consideration.

The 1955 appropriation is about ten per cent of the total budget, leaving out the military, says the AMA Washington office. It is four times the amount allotted to the Department of Interior, six times the Department of Labor, and eight times the Department of State.

Suggestive of the popularity of being identified with health legislation, 38 percent of our congressmen, and a total of 96 senators, signed one or more health bills.

Your KSMA Legislative Committee and agencies of the American Medical Association are alert to proposals affecting the health of our citizens and the medical profession. But committees of even the best and ablest in the profession cannot do it all. We as physicians and citizens must be alert and responsive to the problem. Congressmen and senators will act on what the folks back home tell them. The tendency is to "grease the wheel that squeaks the loudest." Congressmen and Senators want to represent us fairly, but they must have our informed opinions.

The best interest of the public may greatly suffer during the days ahead as strong tides, competing for votes and power, move into action. As the 84th Congress gets under way, KSMA physicians will have a splendid opportunity to demonstrate that "we are citizens, too."

ORAL DRUG THERAPY OF ESSENTIAL HYPERTENSION

In the past, drug therapy of hypertension has been varied, promiscuous and ineffective. A multitude of herbs, extracts and chemicals have had their brief hour and then have been relegated to that ever growing closet for medical "fads". Failure of these preparations was due to their lack of significant hypotensive properties or to intolerable side-effects.

Current drug therapy gives reason for more optimism even though we have not yet developed the ideal drug. We now have drugs which are truly hypotensive but which must be taken under close observation to control side-effects. The more potent ganglionic blocking agents may actually produce serious complications due to postural hypotension. Sudden syncope has resulted in skull fracture and other injuries. Coronary and cerebral thrombosis and renal failure have been reported as complications of the use of these drugs. Because of the power of these preparations to do great harm, as well as good, the physician is obligated to select carefully cases for therapy.

Controversy continues as to whether milder cases of hypertension should be treated or ignored. However, there is general agreement that severe hypertension requires "all out" management.

Currently, the drug of choice for the mild and moderate hypertensive patient is Rauwolfia. It is available as a powder of the whole crude root, a total alkaloidal fraction, and as the pure alkaloid, reserpine. Its effects are central and slow in their appearance. Nasal stuffiness, drowsiness and weight gain are the side-effects. It tends to produce bradycardia and seems to be more effective in essential hypertension when it is accompanied by tachycardia. The blood pressure is lowered gradually with no abrupt crises in most patients and two or three weeks of therapy is usually necessary to produce maximum hypotensive effect from a given dose of the drug. In more severe cases of hypertension, Rauwolfia is useful as an adjunct to smooth the side-effects from some of the more potent drugs which we shall mention.

Veratrum acts reflexly through the central nervous system to lower the blood pressure and slow the pulse rate. Its strong tendency to produce nausea and vomiting limits its usefulness. The therapeutic dose and toxic dose are very close together so that relatively few patients are able to tolerate this drug in a dose which will be effective.

Hydralazine (apresoline) in our experience has had limited usefulness. In many instances it will lower the blood pressure but very large doses of the drug are frequently necessary. The side-effects are common and include headache, palpitation, and nausea. Late complications have included rheumatoid arthritis and a lupus erythematosus-like syndrome. Occasionally angina pectoris accompanied by electrocardiographic changes occurs while patients are taking apresoline and the drug must be withdrawn if this occurs.

Agents producing automatic blockade will produce postural hypotension and if the fall is excessive, syncope may result. Parasympathetic blockade may produce blurring of vision, dry mouth and loss of tone of the gastrointestinal tract causing constipation. Hexamethonium when given orally has never been satisfactory in our experience. A newer blocking agent, pentolinium, gives a smoother control over blood pressure levels and apparently has fewer of the undesirable parasympathetic effects.

Combinations of the above drugs with Rauwolfia have in general been more satisfactory than any of the given drugs when used alone.

In evaluating oral drug therapy of essential hypertension one must remember that this is a chronic disease in the majority of instances so that proper assessment of the value of therapy takes several years rather than several months. In malignant hypertension which runs a rapid course, several investigators have been able to modify the course by use of pentolinium. The presence of uremia contraindicates the use of these drugs as they may hasten renal failure.

To prescribe drug therapy for all patients with mild hypertension seems foolhardy. The physician using good clinical judgment who selects cooperative and intelligent patients with moderate or severe hypertension may relieve the patient's complaints and also lower his blood pressure and affect favorably the prognosis. Perhaps it is even more important for the patient to select an understanding physician who will individualize the problem rather than rely on the current "combination" or "shotgun" tablet which is the "latest thing" for high blood pressure.

Ralph M. Denham, M.D.

President's Page

In Medicine as in all walks of life progress through effort stimulates the inspiration to further accomplishment. For this reason it would seem appropriate at this time to present to you a glimpse of an organization and brief sketch of its meeting, held at Lansing, Michigan, this November 20 past.

The Mid-Western State Medical Association Officers Conference is composed of the presidents and vice-presidents, or their representatives, and the secretaries of the Ohio, Indiana, Kentucky, Illinois, Wisconsin and Michigan associations. It was my pleasure to be a representative of our association at this most interesting and informative meeting. William Henry Howard, M.D., immediate past president of the Indiana State Medical Association and one of the founders of the year-old organization, presided.

The impact upon physicians as individuals and the profession as a whole of the improper or inadequate management of certain knotty problems demands the understanding and thoughtful consideration of, and the final definitive action upon, these problems. Some of the subjects considered were:

(1) The effort of certain powerful national veterans organizations to encourage their state components to introduce legislation which would admit all licensed physicians to the staff of any tax supported hospital and to press for its enactment was discussed. By these measures all types of "physicians" recognized by a legal licensing board would be admitted to hospital staffs regardless of training, qualifications and experience.

(2) Also considered were the ever-increasing lobbies and mounting expenditures devoted to furtherance of legislation favorable to cultists. The problem of adequate distribution of physicians in marginal areas was discussed. It was pointed out that many cultists go into these areas.

(3) "Third Party Medicine," or the health insurance problems, the Blue Cross and Blue Shield, with respect to indemnity as opposed to the total coverage service plan, the Kiser Plan, U. M.W. proposals, and related enterprises were gone over at length. The actual force behind Federal re-insurance, which is at present unnecessary in actuarially sound insurance, was discussed.

(4) The progressive increase of medical costs was highlighted. Is the profession, the hospital, the pharmaceutical industry responsible and/or at fault? Is there proper justification, and if not what can be done to protect the public and the profession? A study of fee schedules, the matter of hospital costs actual and reported, and the mark-up of drugs were touched on briefly.

Time and space will not permit further elaboration of this interesting and important meeting. It has seemed proper to present for your serious consideration these several gnarled and sinewy problems. The fruit of your deliberation in the form of constructive progressive commentary will be gratefully received by your president and his staff.

COLEMAN C. JOHNSTON, M. D.
Vice-President, Eastern District

ORGANIZATION SECTION

Theodore Gold to Speak Jan. 20 at Ky. Rural Health Conference

Theodore Gold, Washington, D. C., a high official in the United States Department of Agriculture, will be the featured luncheon speaker at the Fourth Annual Kentucky Rural Health Conference, which will be held January 20 at the Kentucky Hotel in Louisville, announced Wyatt Norvell, M. D., New Castle, chairman of the KSMA Rural Health Committee and the Kentucky Rural Health Conference.

Mr. Gold

The conference will strive to stimulate the interest of both laymen and physicians in the Kentucky rural health council movement, the work of which is fostered through voluntary cooperative effort at the community level.

Clyde C. Sparks, M.D., Ashland, president of KSMA, will set the tone of the conference in his greetings from the Association.

"It is the hope of the Rural Health Committee that at least one physician from every county in the state will attend the conference," Dr. Norvell said.

"The afternoon session will be devoted to group discussions of health problems presented by speakers in the morning sessions. Contribution to these group sessions by KSMA members serving as resource people can immeasurably strengthen the conference."

In addition to Mr. Gold's address other speakers will talk on "Physician Location—A Personal Choice", "Nutrition", "Immunization", and "Sanitation." All subjects will be approached from the standpoint of how local rural health councils can help in the solution of rural Kentucky health problems. The same will apply to a dramatic presentation at the beginning of the conference entitled "This Was Your Life—Death's Annual Report."

In addition to KSMA, the conference is being sponsored by some 20 state-wide organizations which have major interests in rural and health problems of Kentucky. Physicians who attend are urged to fill their cars with other community leaders. Those unable to attend are asked to invite farmers, homemakers, extension agents, newspaper editors, and other lay leaders to attend.

Louisville to Get TV Broadcast on PG. Education Feb. 9

Louisville is to be included in another nation-wide postgraduate medical education television program in a 30-city coast to coast closed circuit broadcast February 9, 1955.

The AMA Board of Trustees at the Eighth Annual Clinical Session held early in December at Miami made the original announcement. The AMA in cooperation with the Smith, Kline and French Laboratories, will sponsor the program.

According to the Miami announcement, the county medical society will be host for the broadcast in each of the 30 outlets. All KSMA members are invited to attend. An announcement will be given later of the exact time and place for this program.

KSMA members had their first look at postgraduate education on closed circuit television at the close of the 1954 Annual Meeting, when it participated in a 34-city broadcast.

County Society Officers Conference to Be in Lexington, April 7

The Fifth County Society Officers Conference to be held at the Phoenix Hotel, Lexington, Thursday, April 7, will be built around the theme of strengthening the local county medical society organization and building more effective public service programs.

Clyde C. Sparks, M.D., Ashland, KSMA president, who made the announcement, stated that nationally known experts in the various fields of medical organization work had been committed to give the day-long program, which is sponsored by the Association.

Among the speakers who will give presentations at the conference are C. Elliott Bell, M.D., chairman of the Public Relations Committee of the Macon County Medical Society, Decatur, Illinois; Walter Porteus, M.D., Franklin, Indiana, of the Indiana State Medical Association; Ernest B. Howard, M.D., Chicago, assistant secretary of the AMA, and Jerry

Pettus, Public Relations councilor and assistant to the president of the 6000 member Los Angeles County Medical Association.

"This conference promises to be among our very best. New county medical association officials will find this a most profitable day and the official family of the Association warmly urges all to plan to be at the Lexington meeting, April 7," Dr. Sparks said.

Aces, Deuces Elect Dr. Underwood As Chairman at Miami Meeting

Bruce Underwood, M.D., Louisville, one of Kentucky's delegates to the AMA, was elected chairman of the Aces and Deuces Club Monday, November 29, during the organizational meeting at the McAllister Hotel in Miami.

Dr. Underwood, who is also KSMA secretary and general manager, has been serving as secretary of the club. He succeeds as chairman, W. Andrew Bunton, M.D., Cheyenne, Wyoming.

The Aces and Deuces Club is made up of states who have only one or two delegates to the A.M.A. The club held its annual organizational meeting in connection with the AMA 8th Annual Clinical Session at Miami, November 29 to December 2.

AMA Delegates Consider Potent Problems at Miami

Hospital accreditation, geriatrics, osteopathy, and the doctor draft were among the subjects acted upon by the American Medical Association House of Delegates at the Eighth Annual Clinical Session in Miami, November 24-December 2.

Clark Bailey, M.D., Harlan, vice-president of the AMA and delegate from Kentucky, and Bruce Underwood, M.D., Louisville, KSMA general manager and KSMA delegate, represented the Association. Dr. Underwood served as chairman of the Reference Committee on Military Medical Affairs.

The House voted to ask the Joint Commission on Accreditation of Hospitals to supply a copy of the letter of notification regarding the results of the survey of each hospital to the Hospital Administrator, to the Chief of the professional Staff and to the Chairman of the Governing Board of the hospital. This action grew out of a resolution presented by the Indiana State Medical Association.

Acting on a resolution from the Pennsylvania Association, the House directed the AMA Board of Trustees to "consider the creation of an organization on geriatrics within the present structure of the American Medical Association." The purpose of the organization would be (1) to work with state associations, (2) to act as a liaison agency, (3) to disseminate facts to the public, and (4) to perform such other duties as would advance medical care to people of the older age group.

Action on the matter of schools of osteopathy was deferred until the June, 1955, meeting of the House. It was reported that plans were under way to visit five of the six schools of osteopathy for "on campus" observations.

The House of Delegates went on record opposing the extension of the "Doctor Draft Law" when the current statute on this subject expires June 30, 1955. The Board of Trustees was instructed to work with the Council on National Defense in providing the best medical service for the armed forces.

Numerous other actions were taken which dealt with Insurance Grievance Committees, subsidized medicine and malpractice insurance. Any KSMA member wishing additional information may write the Headquarters Office.

Dr. McCarty Gets SMA Post As 55 From KSMA Attend

A. Clayton McCarty, M.D., Louisville, Councilor from Kentucky of the Southern Medical Association, was elected to the three-man Executive Committee of the SMA at its 1954 Meeting in St. Louis, November 8-11, which was attended by 55 Kentuckians.

Robert L. Sanders, M.D., Memphis, was installed as president of the organization, and W. Raymond McKenzie, M.D., Baltimore, was named president-elect. The 1955 Annual SMA Session will be held in Houston. The Golden Aniversary Meeting is scheduled for Washington, D. C., in 1956. The SMA plans for its 1957 Session to be held at Miami.

Jesshill Love, M.D., Louisville, was elected secretary of the Section on Radiology at the St. Louis Session. Other Kentucky physicians and their wives who registered at the KSMA meeting, according to the Daily Bulletin were:

Joseph C. Bell and wife, Louisville; A. D. Buttersworth, Murray; B. N. Carle and wife, Paducah; John Ewing Dunn and wife, Paducah; William V. Eaton and wife, Paducah; J. J. Glaboff, Louisville; F. J. Halcomb, Jr., and wife, Scottsville; Michael M. Hall and wife, Campbellsville; O. J. Hayes, Louisville; J. F. Heinrich, London; William O. Johnson, Louisville; Conrad Jones and wife, Murray; David L. Jones and wife, Fulton; Irving Kanner and wife, Lexington.

K. L. Lockwood and wife, Outwood; Jesshill Love, Louisville; Shelton H. Mann, Louisville; William K. Massie and wife, Lexington; A. Clayton McCarty and wife, Louisville; Oscar O. Miller and wife, Louisville; Robert F. Monroe and wife, Louisville; William Ray Moore and wife, Louisville; Carlisle Morse and wife, Louisville; Israel Muss, Luisville; W. W. Nicholson and wife, Louisville; Sam A. Overstreet and wife, Louisville.

J. Vernon Pace and wife, Paducah; Augustus J. Paul and wife, Louisville; Leland E. Payton, Lynch; John A. Petry and wife, Louisville; Thomas C. Roach, Paducah; Gradie R. Rowntree and wife, Louisville; Marjorie Rowntree, Louisville; James A. Ryan and wife, Covington; Paul J. Sides, Lancaster; M. L. Smith, Maceo; Joseph A. Stoeckinger, Lexington; K. R. Thompson, Lexington; John D. Trawick, Jr., and wife, Louisville; Allan Zoeller, Louisville.

On November 9, according to the Bulletin, the following Kentucky physicians and wives registered: John D. Allen, Louisville; Lytle Atherton, Louisville; J. Duffy Hancock, Louisville; V. A. Jackson and wife, Louisville; Paul Mapother and wife, Louisville; Ora M. Mason, Murray; Lloyd M. Mayer, Lexington; W. C. Morris, Louisville; Edwin W. Nolan, Harlan; James E. Parker, Louisville; E. L. Reeves and wife, Paducah; Ephraim Roseman, Louisville; James E. Ryan and wife, Louisville; C. Dwight Townes, Louisville; Karl D. Winter and wife, Louisville.

Thirty-Eight KSMA Members Attend 8th Clinical Session of AMA

Thirty-eight members of KSMA attended the Eighth Annual Clinical Session of the AMA which was held in Miami, November 29 - December 2, according to the AMA Daily Bulletin.

Following are the physicians from Kentucky who registered for the convention:

John D. Allen, Louisville; Clark Bailey, Harlan; C. M. Bernhard, Louisville; Clinton C. Cook, Buechel; M. R. Cronen, Louisville; K. L. Cummings, Lexington; P. W. Cummings, Louisville; James C. Drye, Louisville; Robert N. English, Henderson; John B. Floyd, Richmond; John B. Floyd, Jr., Lexington; J. A. Freeman, Dawson Springs; J. T. Gilbert, Bowling Green;

L. T. Hiltz, Covington; John L. Keyes, Lexington; J. M. Kinsman, Louisville; J. E. McKinney, Maysville; A. O. Miller, Scottsville; Lawrence T. Minish, Louisville; H. R. Molony, Covington; R. C. Moss, Bowling Green; W. Vinson Pierce, Covington; Harry G. Reid, Louisville; Gladys L. Rouse, Florence; A. A. Shaper, Louisville;

William Stein, Fort Campbell; Edwin P. Scott, Louisville; John H. Siehl, Covington; E. G. Skaggs, Fleming; L. H. South, Louisville; W. B. Troutman, Louisville; E. Alden Terry, Louisville; Bruce Underwood, Louisville; James A. Ward, Paducah; Melvin J. Weber, Ludlow; William W. Wainer, Providence; Shelton Watkins, Louisville; Charles A. Wood, Auburn.

Dr. Phelps Addresses Ky. Academy of General Practice Nov. 18

Malcolm Phelps, M.D., national director of the American Academy of General Practice, was the featured speaker at a one-day seminar of the Kentucky Academy, attended by 115 members in Lexington, November 18.

Dr. Phelps, in his remarks before the Eastern Kentucky group, told of the founding of the Academy, its functions and purpose, which is to protect the rights of the general practitioner. There are no limitations that a general practitioner places on his talents, Dr. Phelps said, adding that he is given full latitude in both the science and art of medicine.

Garnett J. Sweeney, M.D., Liberty, president of the Kentucky Academy, presided. Walter Coe, M.D., Louisville, spoke on Recent Advances in Medicine, E. H. Sanneman, M.D., Louisville, spoke on Recent Advances in Hematology, and Joseph A. Little, M.D., also of Louisville, spoke on Recent Advances in Pediatrics.

Early Reports Indicate Success In Diabetes Detection Drive

Early reports from the county medical societies indicate another successful Diabetes Detection Drive, according to Carlisle Morse, M.D., Louisville, chairman of the Kentucky Medical Association Diabetes Committee. The 1954 campaign started on November 15 and continued through November 21.

"Although a number of counties have not yet reported on their results," Dr. Morse said, "A sufficient number of reports have come in to cause us to feel that the Drive has again been successful in its efforts to save lives of Kentucky citizens through its discovery of the state's unknown diabetics.

"The KSMA Diabetes Committee greatly

appreciates the cooperation given by the county medical societies and the splendid contribution of the medical profession in the state in giving free urine sugar tests to all persons requesting them during National Diabetes Week, " Dr. Morse said.

"Groups and individuals outside the medical profession have also helped in large measure to making the campaign a success." he added.

Several county societies successfully used the St. Louis Drey-Pak testing strip for the first time this year. This strip of sensitized paper which can be mailed dry after immersion in a urine specimen and is subsequently tested in a reagent solution was especially developed for mailing urine tests.

Dr. Bailey Honored by Friends In Home Town of Harlan

More than 200 of his friends and admirers crowded the Lewallen Hotel at Harlan November 23 to pay tribute to a fellow citizen and physician, Clark Bailey, M.D.

The program which followed the format of the popular TV show, "This is Your Life," depicted the life of the former Kentucky State Medical Association president and current vice-president of AMA, beginning with his early boyhood days and continuing through the middle years to the present time.

Gordon Sams, president of the Harlan Speakers Club, was master of ceremonies, and Mrs. J. D. Barlow was the narrator, according to press releases. Numerous voices "out of his past" were heard again by Dr. Bailey.

Dr. Bailey's many public service activities in the fields of education and religion, in civic clubs and public health, in addition to his broad service in organized medicine, provided the background from which many people were drawn to take part in the November 23 celebration.

Drs. Massie and Howard Address KFB—Medical Care Committee

Francis M. Massie, M.D., Lexington, temporary chairman of the Kentucky Medical Foundation, was the featured speaker at a dinner meeting of the Kentucky Farm Bureau Federation Medical-Care Committee in Louisville at the Kentucky Hotel, November 16.

C. C. Howard, M.D., Glasgow, Chairman of the Rural Kentucky Medical Scholarship Fund, also spoke. He said that the Scholarship Fund has helped, or is helping, a total of 85 students since its inception. He stated that 40 young physicians properly located in the state would virtually eliminate the shortage.

Dr. Massie highly complimented the work of Dr. Howard and his Scholarship Fund. He told the group that there was still a great need for more physicians. He estimated that it would cost approximately $25,000,000 to set up and operate a new medical school during the first 10 years.

The Kentucky Medical Foundation circulated a brochure and a pamphlet among the members with data supporting its position regarding the need of a second medical school to supply the state's need for more physicians.

At a meeting of 710 Farm Bureau delegates from 112 counties later in the Convention, the following action regarding to rural health was taken.

"We are convinced that the only feasible way to alleviate critical shortage of physicians in Kentucky is to provide within the state an adequate medical-education program for the training of physicians, and therefore pledge our assistance to the Kentucky Medical Foundation and other similar undertakings, working toward the establishment of a state medical-training center.

"We pledge our-co-operation and support to programs designed to improve nutrition and an adequate diet for all our people. We take special notice of the program for increasing the milk consumption of school children and shall work toward improving this worthwhile undertaking.

"We oppose any form of compulsory health insurance. We shall work toward encouraging farm people to take advantage of voluntary health insurance plans, and urge our doctors to co-operate more fully with this voluntary undertaking. We condemn the practice of charging for medical services solely on the ability to pay."

CORRECTION

The staff of the Journal of KSMA wishes to apologize for the error appearing on Page 970 of the December, 1954, issue listing the names of the 1955 Nominating Committee. The correct list of members of this committee is as follows:

Charles M. Edelen, M.D., Louisville
Coleman C. Johnston, M.D., Lexington
Robert W. Robertson, M.D., Paducah
Richard Rust, M.D., Covington
Charles B. Stacy, M.D., Pineville.

Dr. Pace, Greenville, N. C., Named 1954 Family Doctor by AMA

Karl B. Pace, M.D., of Greenville, North Carolina, was named the 1954 General Practitioner of the Year at the opening session of the AMA House of Delegates in Miami, November 30, 1954.

Joseph I. Greenwell, M.D., New Haven, received the award in 1953, the first KSMA member to win the coveted title. Dr. Greenwell has served the people in his home county, Nelson, and adjacent counties for the past 54 years.

Dr. Pace, 66, has been practicing in Greenville since 1914, according to the Daily Bulletin of the AMA, except for time spent during World War I in Europe as commander of a hospital train. During a span of 40 years practice he has worked in so many ways in his community that one of his fellow citizens spoke of him as "one of the golden assets of his community."

In a statement for the press, Dr. Pace said that it is not infection that does the big damage these days. "—it's ulcers that come from getting mad at your husband or wife and staying mad. It's keeping up with the Joneses and getting head over heels in debt.—The mass of troubles nowadays are psychosomatic."

Earlier last year Dr. Pace was selected General Practitioner of the Year for North Carolina.

KSMA Council Urges Members To Pay AMA Dues

KSMA members who have not been paying their AMA dues are being urged to do so in 1955 by the KSMA Council.

"We are gratified that a vast percentage of our KSMA members are paying AMA dues. To those who are not now paying these dues, the Council warmly urges their favorable consideration of this matter," Branham Baughman, M.D., Frankfort, chairman of the Council, said.

With each membership in the AMA goes a subscription to the Journal of AMA. If KSMA members practice in a group or share a waiting-room with another physician who is also a member of the AMA, it may be that they will wish to substitute for the regular AMA Journal one of the following specialty journals, which are also published by the AMA.

A.M.A. Archives of Internal Medicine

American Journal of Diseases of Children

Archives of Dermatology and Syphilology

Archives of Neurology and Psychiatry

Archives of Pathology

Archives of Surgery

Archives of Otolarynology

Archives of Ophthalmology

Archives of Industrial Hygiene and Occupational Medicine.

If you wish to substitute one of the specialty journals listed above for the Journal of AMA, write the AMA at 535 North Dearborn Street, Chicago 10, Illinois.

Edward Churchill, M. D. Receives David W. Yandell Award

The annual David W. Yandell award was presented to Edward D. Churchill, M.D., former president of the American Surgical Association and Homans Professor of Surgery at Harvard Medical School Boston, at a dinner given by the Louisville Surgical Society following the 2nd annual David W. Yandell lecture, November 11, 1954

Dr. Churchill delivered the lecture, the subject of which was "The Healing of Wounds." While in Louisville, Dr. Churchill also conducted several surgical conferences at the University of Louisville Hospitals and addressed the Faculty Research Seminar of the University on "Research in Surgery."

The annual award and lectureship were instituted to honor the memory of David W. Yandell, founder of the Louisville Surgical Society, who was professor of Surgery in the University of Louisville School of Medicine from 1869 to 1898.

Ephraim McDowell House Pictured In "Scenic South" and "Scope"

The story of Ephraim McDowell, the founder of abdominal surgery, and his almost equally famous patient, Jane Todd Crawford, with illustrations showing the exterior and interior of the McDowell house at Danville, as decorated and furnished by the Woman's Auxiliary of the Kentucky State Medical Association, was carried in two publications recently.

"Scope", published by The Upjohn Company, carried a particularly attractive color-photo of Dr. McDowell's medicine chest, containing original vials with labels of medicaments, on a finely grained cherry table.

"Scenic South", published by Standard Oil Company of Kentucky carried four pages of black and white photographs with captions telling the McDowell story.

Muldraugh Hill Medical Society Meets in Louisville Dec. 9

The Muldraugh Hill Medical Society met on December 9 at St. Anthony's Hospital in Louisville.

Case reports on the morning program were given by Ellis Duncan, M.D., William C. Durham, M.D., D. W. Barrow, M.D., Herbert L. Clay, Jr., M.D., James Ryan, M.D., and J. A. Simrall, M.D., all of Louisville.

After lunch the program was given by the following participants: Major William J. Grace, MC, Captain Amelia D. Amizich, WMSC, Captain Odis G. Glover, MC, and Captain Bertram Schneider, MC, all of Fort Knox.

State Asked to Make New Medical School Survey by C. of C.

The directors of the Louisville Chamber of Commerce have asked Governor Wetherby to have another survey made to determine whether Kentucky needs two medical schools.

The directors said a new survey would help to determine "whether it would be to the best interest of the taxpayers and to the state at large to consider these alternatives:"

1. Joint operation of a Department of Medicine of the Universities of Louisville and Kentucky.

2. Integration of the University of Louisville School of Medicine with the University of Kentucky.

3. Expansion of the University of Louisville School of Medicine and construction of a general hospital by the state in Louisville's Medical Center.

Policy Set to Remove RX Legend

A standardized procedure for removing prescription requirements from certain drugs and placing them in the over-the-counter category has been set up by the Food and Drug Administration, according to the A.M.A. Washington Letter. Under the new procedure, the change may be initiated by the FDA commissioner on his own decision, or on the filing of a petition by an interested party.

After publication in the Federal Register with a request for comments a public hearing may be held before putting the change into effect. The Federal Food and Drug Administration emphasized that comments from the medical profession as to the safety of a drug for lay use will be welcomed in every case where the commissioner proposes to replace the legend "Caution: Federal law prohibits dispensing without prescription" with directions for use by the general public.

Dr. Underwood Addresses State Health Group Nov. 10

Bruce Underwood, M.D., State Health Commissioner, and Secretary and General Manager of the KSMA, spoke at the annual conference of Kentucky's Health Officers and Administrators, which met in Louisville at the Henry Clay Hotel, November 8-10.

"One of the primary objectives in public health in the state is to strengthen local health departments and to obtain more local financial support for them," said Dr. Underwood.

He said minimum standards for local health departments cannot be met in many counties for lack of sufficient funds. He estimated that a small Kentucky county might obtain adequate public health services for $1.65 per capita.

About 170 health officers, administrators and local health employees attended the three-day conference.

A. M. A. Plans Bermuda Cruise

Arrangements for a Bermuda-Nassau cruise for physicians and their wives following the AMA convention at Atlantic City in June have been completed, the American Medical Association has announced.

All of the choice space on the palatial Ocean Monarch has been reserved for the American Medical Association for the eight-day cruise. The steamer will sail from New York City at 7:00 p.m., June 10, and will dock at New York at 9:00 a. m., June 18. Port of call visits, sight seeing motor trips, shopping expeditions, and a climatic dinner dance at the luxurious Continental Room of the British Colonial at Nassau have been arranged. Reservations should be made immediately by those who wish to take advantage of this carefully planned trip.

AMA Commission to Make Survey

One of the closing actions of the AMA Board of Trustees at the Eighth Clinical Session in Miami was to appoint a 13-member Commission to begin work immediately upon a comprehensive survey of the various types of insurance plans through which the people of America receive medical care.

Philippine Medical Society in Ky. Enthusiastic About State

The members of the Philippine Medical Society in Kentucky, a recently organized group, are enthusiastic about Kentucky and Kentuckians, according to their president, J. C. Bacala, M.D., of St. Anthony Hospital, Louisville.

There are 10 Philippino doctors in Louisville and two in Lexington in the PMSK. Two more are expected to arrive in the state soon to increase the membership to 14.

Other officers of the group are: Gilberto Gammaz, M.D., General Hospital, Louisville, vice-president, and Giliana Esguerra, M.D., St. Anthony Hospital, Louisville, secretary-treasurer.

TV to be Used in P. G. Effort

The potential use of television in future postgraduate medical education will be one of the featured discussions of the 51st Annual Congress on Medical Education and Licensure to be held February 5-8 at the Palmer House in Chicago, co-sponsored by the Council on Medical Education and Hospitals of the AMA and the Federation of State Medical Boards of the United States and the Advisory Board for Medical Specialities.

The first of the series of annual work-shop conferences will be devoted to the part television can play in the field of postgraduate medical education in an all-day session February 5. The place of legal and forensic medicine in undergraduate education and the future status of internship in the medical education program will be discussed during the February 8 session.

"Medic" Wins TV Award

"Medic," NBC's new medical program was named the 1954 "outstanding program on television," by the Sylvania Television Award Committee. The program, presented in cooperation with the Los Angeles County Medical Association, is seen each Monday night at 9:00 p.m. EST over the NBC television network.

Medical Foundation Elects Officers

Three KSMA members have been elected to offices of the Kentucky Medical Foundation. Francis M. Massie, M.D., Lexington, and Sam A. Overstreet, M.D., Louisville, were elected vice-presidents, and Howell J. Davis, M.D., Owensboro, was elected to the Executive

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Journal of the Kentucky State Medical Association, January 1955

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Committee.

J. Stephan Watkins, former State highway commissioner, was elected as president of the foundation, organized to promote a State-supported medical school and to provide better services in the state.

Pertinent Paragraphs

The placque award for the "organization that has done most to promote development of a state or area" given yearly by the National Association of Travel Organizations went this year to the State Division of Publicity, Frankfort, for its promotion of Kentucky's travel industry, of which Mr. Mack Sisk, Frankfort, is director.

The American Orthopsychiatric Association will hold its 32nd Annual Meeting at the Hotel Sherman, Chicago, on February 28, March 1 and 2, 1955. Approximately 100 scientific papers will be presented by psychiatrists, psychologists, social workers, educators, sociologists, and anthropologists. Inquiries about the program, reservations, exhibits and other matters should be directed to Marion F. Langer, American Orthopsychiatric Association, 1790 Broadway 19, N. Y.

Four incumbent physician-members of the House have won re-election; a fifth was defeated in a bid for a second term. Ivor D. Fenton, M.D., (R., Pa.), Thomas E. Morgan, M.D., (D., Pa.), A. L. Miller, M.D., (R., Neb.) and Walter H. Judd, M.D., (R., Minn.) were reelected, and Will Neal, M.D., (R., W. Va.) lost out. Rear Admiral Ross T. McIntire, personal physician to the late President Franklin D. Roosevelt and one time medical director of the American Red Cross, who ran on the Democratic ticket, was defeated in his first bid for a Congressional seat.

Segregation has ended in all VA hospital, domiciliaries, and other institutions, according to an announcement from the Veterans Administration. After a survey a year ago indicated that segregation in some form existed in 47 installations in 23 states, a "concerted program started in 1953, shortly after Harvey V. Higley became administrator of Veterans Affairs." VA now declares, "Today no segregation of any type is practiced in VA hospitals and domiciliaries." President Eisenhower congratulated Mr. Higley on the transition.

Dramamine's® Effect in Vertigo

Dramamine has become accepted in the control of a variety of clinical conditions characterized by vertigo and is recognized as a standard for the management of motion sickness.

Vertigo, according to Swartout, is primarily due* to a disturbance of those organs of the body that are responsible for body balance. When the posture of the head is changed, the gelatinous substance in the semi-circular canals begins to flow. This flow initiates neural impulses which are transmitted to the vestibular nuclei. From this point impulses are sent to different parts of the body to cause the symptom complex of vertigo.

Some impulses reach the eye muscles and cause nystagmus; some reach the cerebellum and skeletal muscles and righting of the head results; others activate the emetic center to result in nausea, while still others reach the cerebrum making the person aware of his disturbed equilibrium. *Vertigo may be caused by a disease or abnormal stimuli of any of these tissues involved in the transmission of the vertigo impulse, including the cerebellum and the end organs.*

A possible explanation of Dramamine's action is that it depresses the overstimulated labyrinthine structure of the inner ear. Depression, therefore, takes place at the point at which these impulses, causing vertigo, nausea and similar disturbances, originate. Some investigators have suggested that Dramamine may have an additional sedative effect on the central nervous system.

Repeated clinical studies have established Dramamine as valuable in the control of the symptoms of Ménière's syndrome, the nausea and vomiting of pregnancy, radiation sickness, hypertension vertigo, the vertigo of fenestration procedures, labyrinthitis and vestibular dysfunction associated with antibiotic therapy, as well as in motion sickness.

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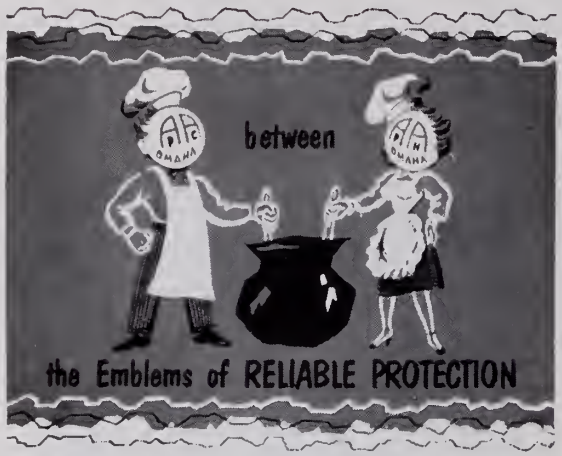
Dramamine (brand of dimenhydrinate) is supplied in tablets of 50 mg. and liquid (12.5 mg. in each 4 cc.). It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

The site of Dramamine's action is probably in the labyrinthine structure.

*Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

Something NEW is Cooking



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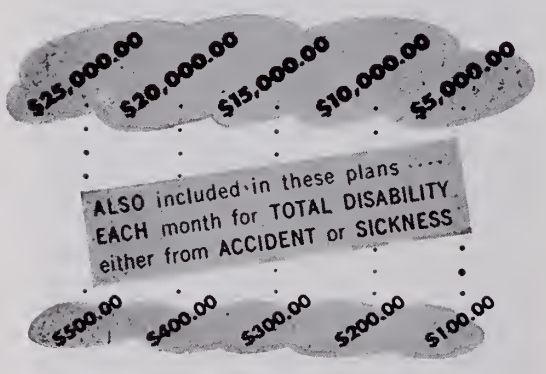

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"Growing Up," a 13-program radio series, is now available through the AMA Bureau of Health Education for use by local medical societies. It presents a dramatic story dealing with the health and emotional problems of modern teen-agers, covering the young person's place in the family, getting started on a career, the problem of gangs, both good and bad ones, skin problems and money matters.

A post-convention tour of Europe is being planned by the AMA in conjunction with United Air Lines, following the annual AMA Convention in Atlantic City, June 6-10. The tour will leave New York on Sunday, June 12, returning July 10. In addition to tours to places of historic and scientific interest, arrangements are being made for medical meetings in Paris, Rome, Lucerne, and London. Leading European scientists will lecture on topics of current interest to all physicians. For further information write the AMA Post-Convention Tour, c/o United Air Lines, 5959 South Cicero Avenue, Chicago 38, Ill.

The Puget Sound Naval Shipyard, Bremer- ton, Washington, is seeking to employ five civilian physicians at its Industrial Medical Dispensary. An initial salary of $7,040 per annum based on a forty-hour work week, with increments of $200 per annum at regular intervals to maximum of $8,040, is offered. Information may be secured from the Board of U. S. Civil Service Examiners, Puget Sound Naval Shipyard, Bremerton, Washington.

The 15th annual Congress on Industrial Health, sponsored by AMA's Council on Industrial Health, will be held at the Shoreham Hotel, Washington, D. C., January 25 and 26, 1955. The 1954 Congress was held in Louisville. Emphasis will be placed on building an effective health program for American Industry, utilizing the facilities of medicine, government, management and labor.

Publication of a manual entitled, "How to Study Nursing Activities in a Patient Unit," has been announced by the Public Health Service, of the U. S. Department of Health, Education and Welfare. The manual offers a scientific method of studying all activities of nursing personnel with the goal of giving nurses more time with patients. It is adaptable to all types of hospitals, both large and small. The manual may be purchased for 25 cents per copy from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

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Committee on Scientific Exhibits
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(Applications for space should be received before July 1, 1955)

1. Title of Exhibit: .....
2. Description or nature of exhibit: (Attach brief description to this blank).
3. Will you require shelf space? .....
4. Give approximate amount of wall space needed. (Included in total space is two side walls of two feet in length) .....
5. Name of institution co-operating in the exhibit (if desired) .....
6. Name of exhibitor: .....

..... (Street & No.) ..... (City)

The Kentucky State Medical Association will provide without cost to the exhibitor the following: Exhibit space, shelves, sign for booth, current, bracket lights. . provided all items are approved in advance by the committee.

Cost of transporting exhibits to the meeting must be borne by the individual exhibitor as well as costs of cards, signs, etc., which are a part of the exhibit.

View boxes, furniture, decorations, etc., may be rented, if desired, by applying directly to Jos. T. Griffin Company, 704 West Main Street, Louisville 2, who supply equipment for the annual K.S.M.A. meeting.

ELECTRON PHOTOMICROGRAPH

Diplococcus pneumoniae 44,000 X

Diplococcus pneumoniae (Streptococcus pneumoniae) is a Gram-positive organism commonly involved in

lobar—and bronchopneumonia • chronic bronchitis • mastoiditis • sinusitis otitis media • and meningitis.

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An attractive new nurse recruitment exhibit has been developed by the Woman's Auxiliary to the AMA for showing at local public gatherings. It outlines the advantages of nursing as a career, such as, security, satisfaction, success, prestige, and professional recognition as well as the specific training and entrance requirements for both the professional and practical nursing courses. This exhibit is available for showing at county and state fairs, 4-H clubs, PTA and other community meetings. Write KSMA Headquarters Office for further information.

The Seventh Annual Symposium on Recent Advances in the Study of Venereal Diseases will be held in the auditorium of the Department of Health, Education, and Welfare, Washington, D. C., on April 28 and 29, 1955. The sessions will be open to all interested physicians and workers in allied fields. Requests for a place on the program should be placed with C. A. Smith, M.D., Chief, Venereal Program no later than January 15, 1955, and should be accompanied by titles and at least tentative abstracts of papers.

A neglected backyard tree is about to give to the world its "richest known source of vitamin C," according to an article in the November issue of "Today's Health. The fruit is known as the Puerto Rican cherry, West Indian cherry, or acerola, and a six-ounce glass of the juice, which is "tart and refreshing" to the taste, contains more than 85 times as much vitamin C as the same amount of orange juice. The fruit's amazing vitamin value was first discovered in 1945 by Conrad F. Asenjo, M.D., but only recently has the experimental work and clinical testing been completed.

AMA's Council on Medical Service has prepared two new pamphlets dealing with health leadership and community health planning. "The Key to Community Health" describes community health councils and offers information on organizing and operating them. "Main Line Route," which was designed primarily for woman's auxiliaries, outlines 10 suggested public service projects. Both booklets may be obtained by writing to the KSMA headquarters office.

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News Items

F. M. Cook, M.D., has resigned as manager of the Veterans Administration Hospital in Louisville, his resignation becoming effective December 31. Dr. Cook has been with the V.A. about 35 years, and came to Louisville in 1946.

Gilly N. Golden, M.D., opened an office in Benham in November. Dr. Golden graduated from the University of Virginia Department of Medicine in 1947, and interned at the Baroness Erlanger Hospital, Chattanooga, Tennessee.

William C. Adams, M.D., instructor in the department of pediatrics at the University of Louisville School of Medicine, has been elected a fellow of the American Academy of Pediatrics. Dr. Adams graduated from Temple University School of Medicine in Philadelphia in 1947. He interned at the Patterson General Hospital in Patterson, New Jersey.

Pressley Smith, M.D., formerly of Owensboro, has set up practice in Hawesville at the newly established Hawesville Medical Center. Dr. Smith is a native of Wuchon, China, and graduated from the Unversity of Louisville School of Medicine in 1953. He interned at the Louisville General Hospital and recently has been associated with his father, E. Dargan Smith, M.D., in Owensboro.

Life insurance companies have contributed more than $1,000,000 to the National Fund for Medical Education, according to an announcement made by the chairman of the Fund's Committee of American Industry, Colby M. Chester. This is the first business group to pass the million-dollar mark since the Fund's inception in 1949. The committee spearheads a campaign for $10,000,000 a year from private sources to keep the nation's medical schools free, solvent and progressive.

All active members of the Student AMA are eligible to submit an essay on "A Medical Student Looks at Blue Shield" to compete for national awards in the Blue Shield Essay Competition. Each local winner receives an all-expense paid round trip to Chicago for the 1955 Annual Student AMA Convention and the opportunity to compete for the three national awards of $500, $300, and $200. Complete contest rules may be obtained from your KSMA Headquarters Office.

County Society Reports

GRANT COUNTY

The Grant County Medical Society met at the Hotel Donald in Williamstown on November 3, 1954, as guests of F. R. Scroggin, M.D., and Mrs. Scroggin.

A movie entitled "The Treatment of Hypertension" provided the program. This movie was made from a nation-wide closed circuit telecast in 24 cities in the United States and was sponsored by the American College of Physicians and financed by Wyeth Laboratories, and was broadcast at the KSMA annual meeting.

After the program a business meeting was held. A motion was made that the Ekotape machine be insured against fire and theft at an estimated cost of $25.00 for three years, and this motion carried.

Election of officers for 1955 was held. A motion was made that all 1954 officers be nominated for next year. No other nominations were made, and the following officers were re-elected: O. A. Cull, M.D., president, and Virginia Kratz, M.D., secretary-treasurer.

The following additional members were present: C. C. Waldrop, M.D., Lenora P. Chipman, M.D., and O. A. Cull, M.D. Visitors were Victor Coleman, representative of Wyeth Laboratories, and Everett Chipman.

The meeting was adjourned to meet with Dr. Chipman in December.

Virginia Kratz, M.D., Secretary

LETCHER

The Letcher County Medical and Dental Society sponsored a meeting and dinner for the Cancer Mobile Clinic at The Pine Mountain Hotel, Wednesday evening, September 29.

The after dinner program was a talk by H. E. Kleinert, M.D., Director of the clinic, demonstrated by films on certain forms of internal cancer.

Member physicians present were: D. V. Bentley, R. Dow Collins, Carl Pigman, Owen Pigman, and Fred Coffee, an associate member. Visitors were: Dr. Kleinert, John Coleman, M.D., Herman Meredith, technician; Miss

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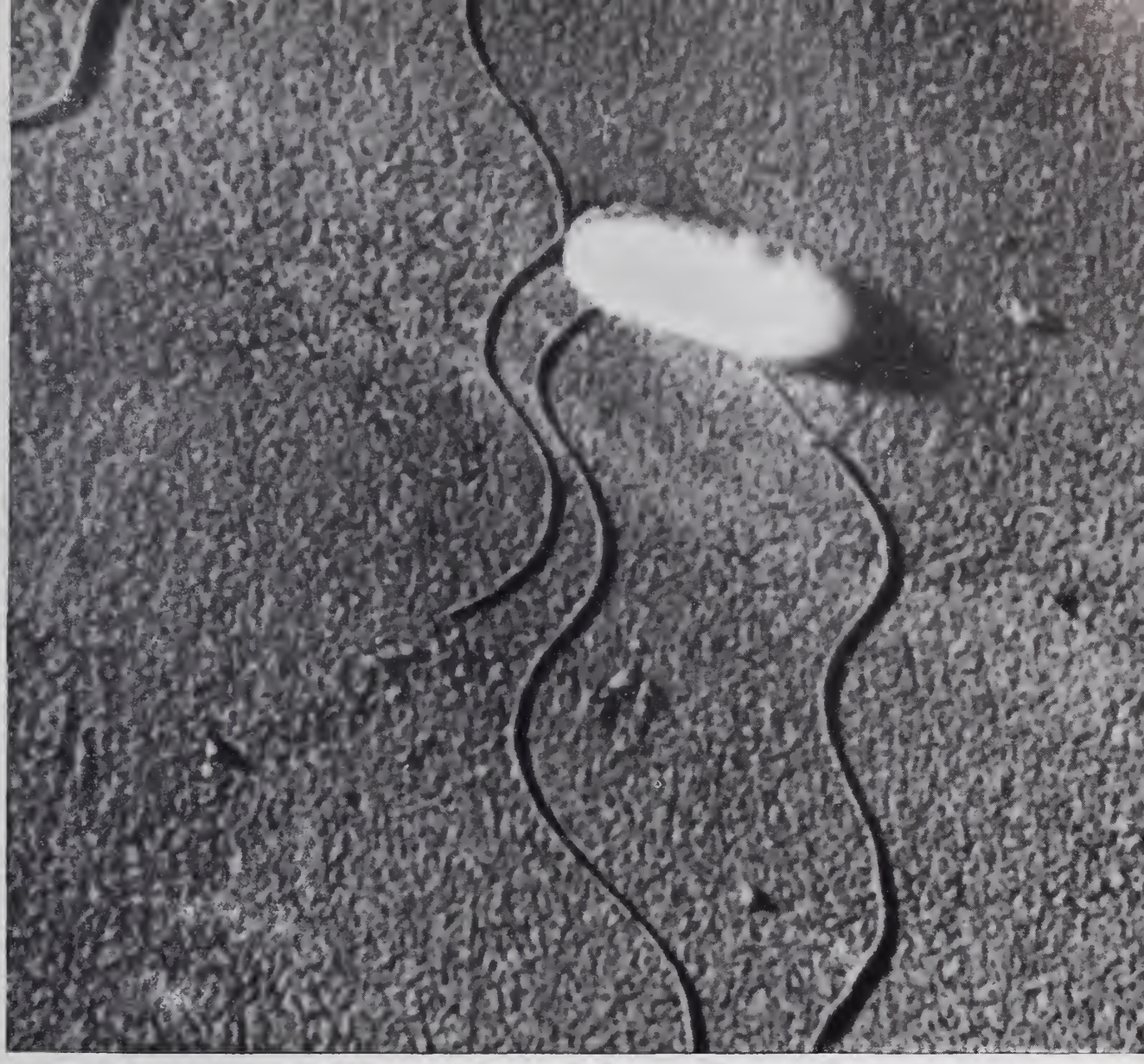

ELECTRON PHOTOMICROGRAPH

Salmonella paratyphi B 32,000 X

Salmonella paratyphi B (Salmonella schottmuelleri) is a

Gram-negative organism which causes

food poisoning • chronic enteritis • septicemia.

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Mae Riley, directing nurse, Mrs. Hester Grigsby, Mrs. Betty Siering and Mrs. Alice McClellan.

Owen Pigman, M.D., Secretary

SCOTT COUNTY

The Scott County Medical Society met on Thursday, November 4, 1954, at the John Graves Ford Memorial Hospital in Georgetown.

Mr. John Guy Miller, Field Secretary of the Kentucky State Medical Association, and Mrs. Teagarden, Superintendent of the John Graves Ford Memorial Hospital, met with the society.

F. W. Wilt, M.D., reported on the Diabetic Detection Drive to be held November 14-20 and distributed tablets for making the tests.

A motion was made and carried that the society be organized for defense in case of war.

C. R. Lewis, M.D., reported that the Hospital staff will hold a meeting on the third Thursday of each month.

Mr. Miller spoke on Veterans Administration affairs, outlining the policy of the American Medical Association regarding the treatment of veterans.

The following additional members were present: J. Campbell Cantrill, M.D.; W. S. Allphin, M.D.; E. C. Barlow, M.D.; A. F. Smith, M.D.; H. G. Wells, M.D.; and H. V. Johnson, M.D.

H. V. Johnson, M.D., Secretary

SHELBY-OLDHAM

The Shelby-Oldham Medical Society met at the Stone Inn on November 18 as dinner guests of J. T. Walsh, M.D., LaGrange.

The meeting was called to order by B. F. Shields, M.D., Shelbyville. A report was made by L. A. Wahle, M.D., on the PR course for doctors' secretaries, which was well attended. Dr. Wahle introduced David Neudstadt, M.D., of Louisville, who spoke on "Arthritis". A general discussion followed his talk.

A. C. Weakley, M.D., Shelbyville, will be the host for the December meeting to be held on the 16th. Other members of the Society and their guests present at the meeting were: A. D. Doak, M.D., Charles Chatham, D.D.S., George Ray, M.D., W. P. McKee, M.D., A. L. Heise, D. D. S., Don Chatham, M. D., George Perrine, M.D., H. T. Alexander, M.D., H. H. Richeson, M.D., H. B. Mack, M.D., C C. Risk, D.D.S., and John Miller, M.D.

C. C. Risk, M.D., Secretary

In Memoriam

PETER C. GUNTERMANN, M. D.

Louisville

1881 - 1954

Dr. Guntermann, 73, a practicing physician in Louisville for 40 years, died at his home on November 22, 1954.

Dr. Guntermann graduated from the University of Louisville Department of Medicine in 1914. He held the rank of major in the Army's Medical Reserve Corp, and was made an honorary member of the Reserve when he retired.

He gave many hours of his time to interests outside the medical profession. Ill health forced him to give up his medical practice in 1952.

FRANK L. LAPSLEY, M. D.

Shelbyville

1866 - 1954

Dr. Lapsley, 88, retired physician and former Shelby County health officer and coroner, died at New Castle, Kentucky, on December 1, 1954. He had been ill about two months.

Dr. Lapsley was born in Bourbon County. He was graduated in 1984 from the Hospital College of Medicine in Louisville and practiced in Bourbon County for 20 years before moving to a Shelbyville farm. He was an elder in the Presbyterian Church at Shelbyville.

ERNEST EDGAR MYERS, M. D.

Lexington

1898 - 1954

Ernest Edgar Myers, M.D., 55, was killed November 2 in an automobile crash near Lexington.

Dr. Myers had retired from active practice and was an Emeritus Member of the Kentucky State Medical Association.

A native Californian, he graduated from the University of California Medical School in 1925.

DAVID L. SALMON, M.D.

St. Petersburg, Florida

1899 - 1954

Dr. Salmon, who was born and reared in Hopkins county, died August 26, 1954, at a hospital in St. Petersburg, Florida, where he had practiced for 20 years. He had been chief eye, ear, nose, and throat specialist at the Bay Pines Hospital, St. Petersburg, until 1949 when he was stricken with illness.

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Shows State Board of Med. Examiners for each state; personnel of Natl. Board of Med. Examiners; educ. requirements of applicants, plan of Natl. Board examinations. Also Examining Boards in Med. Specialties; lists of Health Officers—state, district, county, city.

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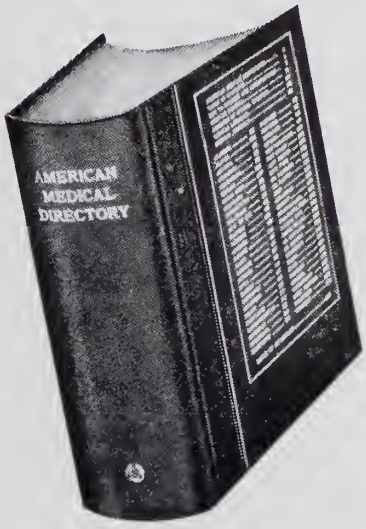

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ALPHABETICAL INDEX OF PHYSICIANS

All physicians are alphabetically listed by name, with city location.

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We take pleasure in announcing that Alvin S. Haines is now a member of our organization.

Mr. Haines has had eight years experience in the field of business management, accounting, and taxation. He received a Bachelor of Science degree from the School of Business, Miami University, Oxford, Ohio. He was in the Marine Corps for three years (1942-1945).

We are confident the addition of Mr. Haines to our staff will help us to maintain our standard of efficiency in serving our clients.

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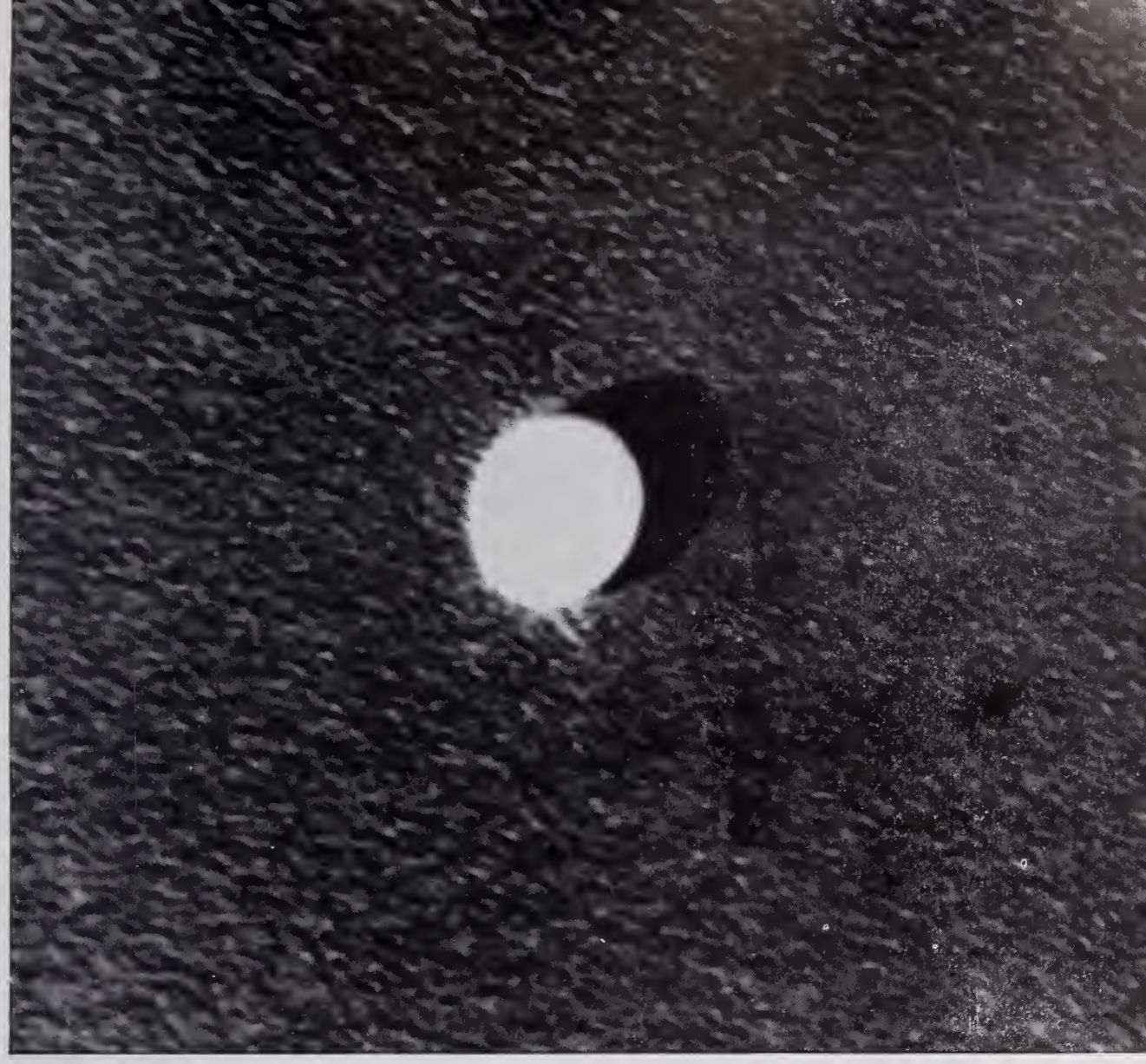

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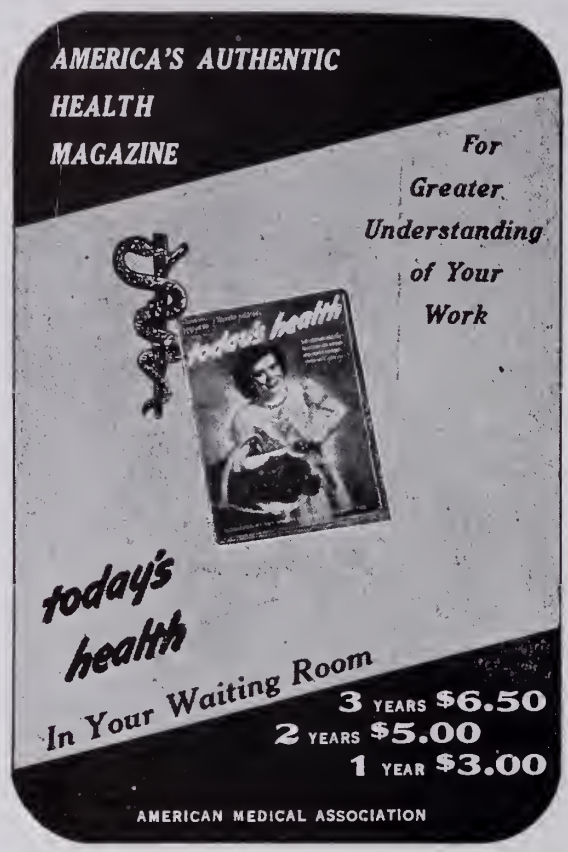

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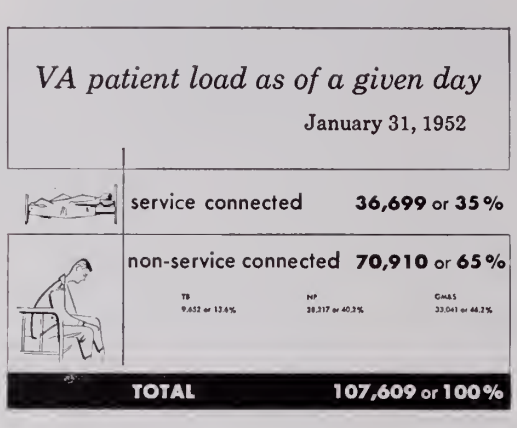
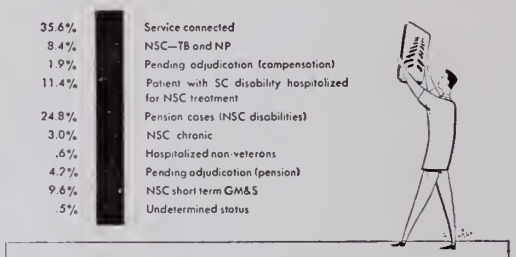


While the VA lists its patient load on a given day as 35% service-connected, only the long-range view of admissions and discharges over a year's time gives a truly accurate picture of the service-connected load (only 15.4%). This "discrepancy" appears because the VA's listing of 35% on a daily basis is not affected by the yearly turn-over of patients—the ratio of VA patients remaining to those treated and discharged (1 to 5.1). Over a period of a year, 84.6% of VA patients are treated for disabilities incurred after—and having no relationship to—military service.

In Viewing the VA Medical Program . . .



VA explanation of patient load on a given day

The above classification is presented by the VA as an explanation of the large non-service-connected patient load in its hospitals. The medical profession recommends that only the first category and those in the third whose disabilities are determined to be service-connected should be entitled to federal medical care. Non-service-connected TB and NP cases should continue to be treated on a temporary basis until community and state facilities can be readied. The remaining groups obviously have no service connection and are hospitalized for illnesses or injuries incurred in civilian life.

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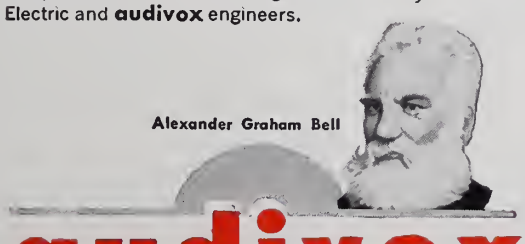

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**Heck, W.E.; Lynch, W.J., and Graves, H.L.: Acta oto-laryng. 43:416, 1953.*

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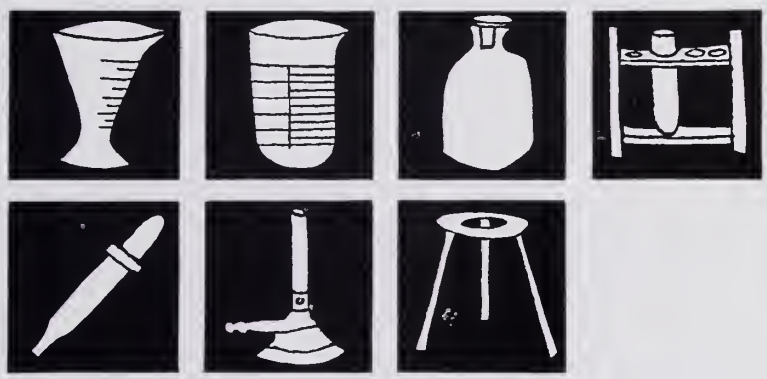

1. Cook, M. H.; Free, A. H., and Giordano, A. S.: Am. J. M. Technol. *19*:283, 1953.
2. Gray, C. H., and Millar, H. R.: Brit. M. J. *4824*:1361 (June 20) 1953.

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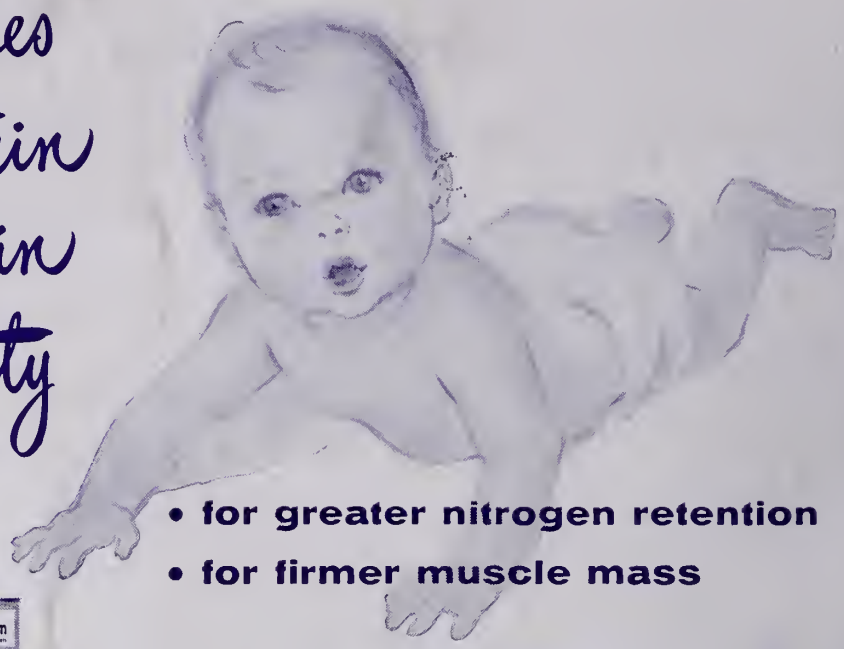

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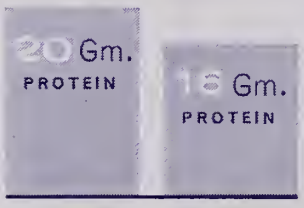

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1. Jeans, P. C., in A.M.A. Handbook of Nutrition, Philadelphia, Blakiston, 1951, pp. 275-298. 2. Stare, F. J., and Davidson, C. S., in The Proteins, American Medical Association, 1945.

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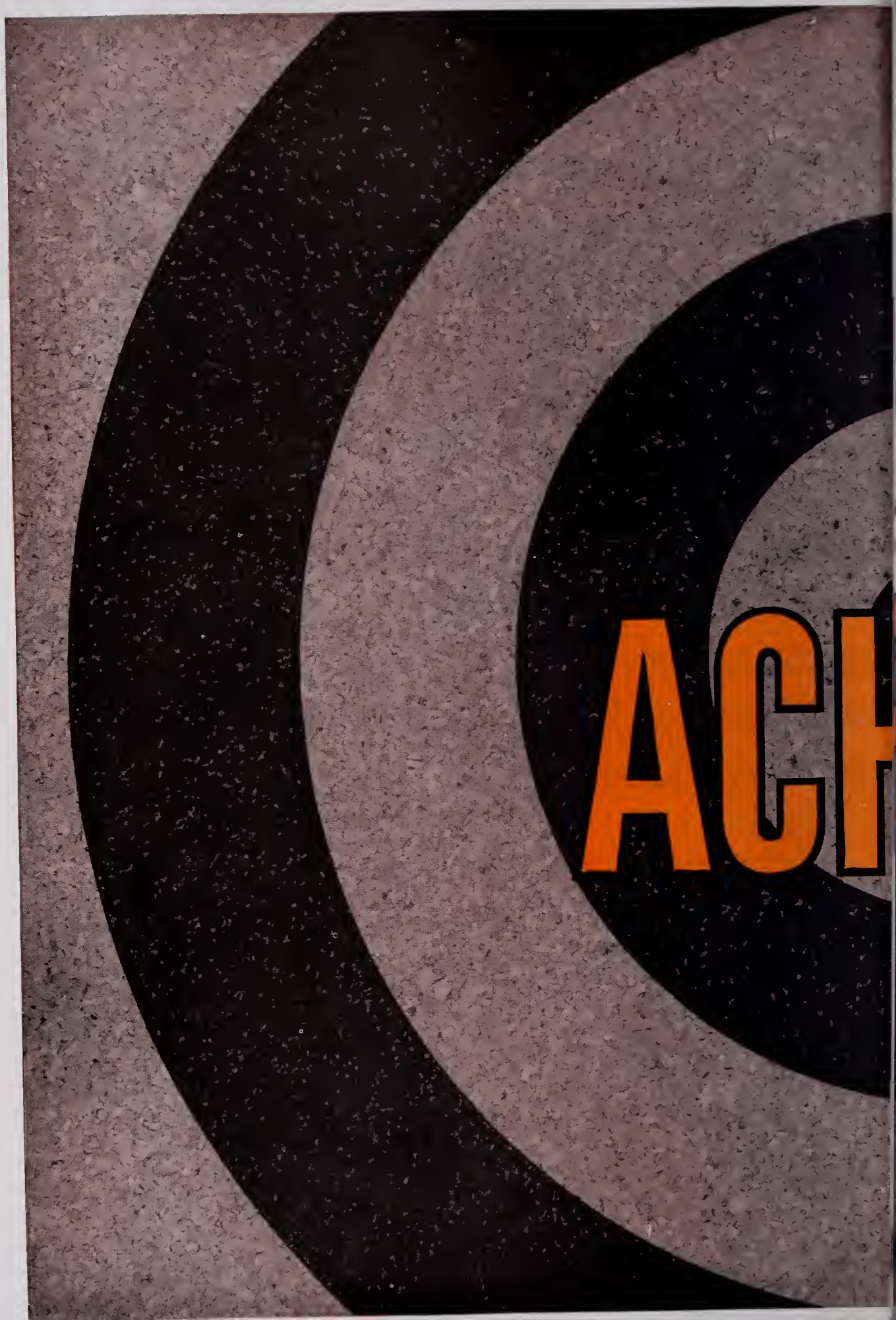
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President's Page

January each year brings to each of us the opportunity of renewing our application or becoming a member of organized medical efforts in this country. This involves, to most of us, membership in our county society, state association, and the American Medical Association. There is rarely any question in our minds about the first two, but to some the A.M.A. seems so far removed that some doubt exists. May I suggest that if you have not read the American Medical Association's publication, "Guide to Services", that you have a treat in store.

Probably no organization in the United States has reached heights of respect in the last few years comparable to those obtained by the A.M.A. It is accepted as the agency which acts collectively for the doctors of the entire country and its territorial possessions. It seems that these factors being true, we should each and every one be a member of this association.

It is our hope that every member of the KSMA will in 1955 become a member of the A.M.A. The type memberships are varied to suit any needs the individual practitioner may require. We can ill afford to lose the many advantages offered at such a minimal cost.

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Recent months have seen the Journal of the Kentucky State Medical Association improve in many ways. With this issue we find a new member of the Journal's family of departments. This new member is the section of book reviews. It has been named, "In the Books."

It is our hope that it will serve a useful purpose and be of help to those who read the Journal. In the coming issues all books received by the Journal will be listed under, "Books Received." A limited number of books of general interest will be reviewed.

We invite your suggestions and criticisms. We will appreciate your help in making this a worthwhile department of the Journal.

Walter S. Coe, M.D.

COMPENDIUM OF UROLOGY by Robert Lich, Jr., M.D., Professor of Urology, University of Louisville School of Medicine, University of Louisville School of Medicine Bookstore, Louisville, Kentucky; 185 pages; Price $2.25

The author has compiled and arranged the material in this compendium in the most logical and systemic fashion and has treated each subject in a clear, concise and understandable manner.

From the beginning to the end, this small book of less than 200 pages is filled with practical and usable urological facts and ideas.

Although it was written primarily for the medical student it will find its greatest usefulness in the hands of the busy general practitioner who has need for a reliable and handy reference book of urology.

If the last sentence in the compendium were to be blazoned across the front page of every newspaper in our land, no doubt it would indirectly lead to the saving of untold thousands of lives.

William R. Miner, M.D.

FUNDAMENTALS OF INTERNAL MEDICINE —Fourth Edition, by Wallace M. Yater, M.D., F. A. C. P.; Appleton-Century Crofts, 1276 pages; Price $13.50

For many years Yater's "Fundamentals" has been one of the standard text books on Medicine recommended to medical students. The fourth edition has a number of changes from the third edition which have in general improved it. In the first place, there are 147 fewer pages in the text, which makes it less bulky. There are major changes in the format: the type appears blacker against whiter paper, which makes it easier to read; the boldface type is smaller and blacker and the type used in the headings of the sections varies but creates a more pleasing impression; the use in the previous edition of boldface type in the body of the text, for emphasis, has now been eliminated, improving its appearance; the Table of Contents has been expanded from six to 20 pages by including page references to individual diseases and subject headings under the chapter headings, making it easier to find specific items. All in all, it is much more readable than its predecessor.

Yater was one of the first, if not the first, to incorporate Tables of Normal Values in a textbook of medicine. That this was a valuable addition is attested to by the fact that many other textbooks now include such tables. In the present edition he also includes formulae for converting milligrams per cent into milliequivalents per liter, thus keeping pace with the modern trend in this respect. The section on "The Physician Himself" is unchanged; this section should be read by all medical students, and even practitioners should find something of value in it.

As for the subject matter itself, he has added new material such as the newer drugs (ACTH and Cortisone, for example) and newly described diseases (cat scratch fever, for example). One criticism which has been made of his textbook has been that the material is presented too briefly; this is necessary because it describes practically all of the diseases known to man, including diseases of the eye, the ear and the skin. The sum total of knowledge of disease is now so great that in writing a single volume textbook on any phase of medicine one is forced to choose between describing a relatively few diseases quite thoroughly and omitting others, or describing every disease comparatively briefly and referring the reader to other sources for more complete information—the "thumbnail sketch" approach. Yater has chosen the latter. In this reviewer's opinion there is a need for both kinds of books. If the reader wishes to get complete information on any subject he should refer to some other text; if he wishes to obtain information quickly to help him in considering possible diagnoses in difficult cases, then this book should be invaluable. For that reason it is recommended as an authoritative and ready reference book, especially to general practitioners.

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*MacKnight, J. C.; Irby, R., and Toone, E. C., Jr.: Geriatrics 9:111 (Mar.) 1954.

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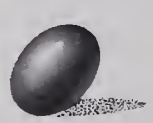

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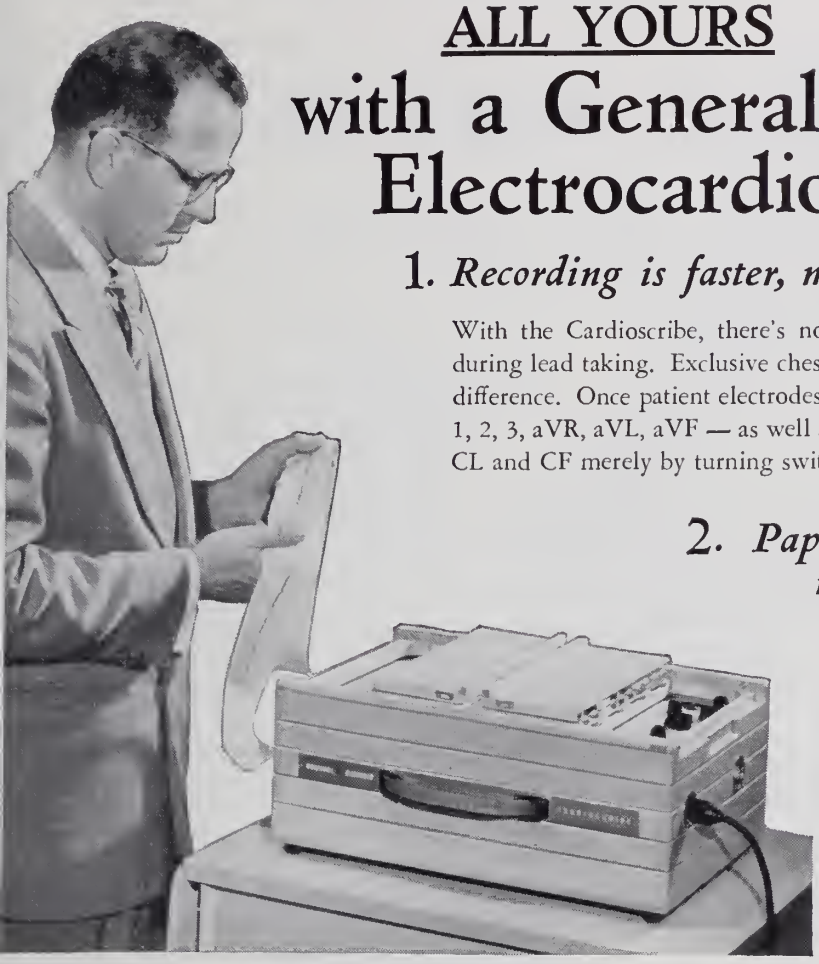

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WASHINGTON NEWS DIGEST

Washington, D. C.—With the 84th Congress well into its first session, all indications point to an active year in medical legislation. Many of the bills will founder somewhere along the way, but as of now an imposing number are lined up awaiting consideration in Senate and House.

Confirmation that medical problems rank high in the administration's work schedule for Congress came early in January in President Eisenhower's State of the Union Message. This is the address, delivered in person before a joint meeting of Senate and House, in which the President annually outlines in general terms the condition of the country and the new legislation he believes should be enacted.

This message highlighted the President's objectives, but did not tell in specific terms how he expected to reach them. The details came later, in five additional messages to Congress, including one on health on January 24. The President wants Congress to take action on the following health medical items:

1. A federal health reinsurance service. This idea was rejected by the House last year, but neither Mrs. Hobby nor Mr. Eisenhower has given up hope for it.
2. A plan to insure better and more uniform medical care for public assistance recipients through larger U. S. appropriations and more administrative controls.
3. Federal assistance in construction of health facilities and in providing more trained health personnel (other than physicians).
4. A new federal program to combat mental illness and return more mental patients to useful lives outside institutions.
5. An improved federal program for aiding crippled children and for maternal and child health.
6. Strengthening of the pure food and drug laws to give greater consumer protection.
7. More attention to "the increasingly serious pollution of our rivers and streams and the growing problem of air pollution."
8. An expanded program for the medical care of military dependents.
9. A voluntary health insurance program for federal civilian employees with U. S. contributions and payroll deductions authorized for the employees.

So much for what the Republican President hopes to get through Congress. It is too early to say how much of this program will have the support of the Congress, now under Democratic control. It is clear, however, that many leading Democrats want to enact some legislation the President didn't include in his program. In the early weeks of the session they introduced scores of bills to carry out their ideas.

Federal aid to medical education is prominent in the plans of many of the Democrats, and some of the Republicans. The bills cover a wide range, some restricted to construction grants but others offering help in meeting operating expenses and incentives to increase the number of students. Other bills offer federal grants to voluntary health plans to subsidize coverage of the indigent, the "medically indigent," the unemployed and the aged. Because the administration has declared itself opposed to subsidies, it is unlikely that any measures of this type will win the suppport of Mrs. Hobby's department and the White House.

Members of both sides of the aisle also are proposing greater emphasis on research seeking the cause and cures of such diseases as cancer, heart disease, mental illness and arthritis. Some of these bills fit in with the Eisenhower program and philosophy, and are likely to have White House support at the hearings.

This tendency to stimulate more basic medical research, both at the federal level and through state grants, may be an important factor when Congress gets around to passing the appropriation bills for the various Institutes of Health, the research arm of U. S. Public Health Service.

Several years ago a Democratic Congress took a serious interest in a bill for federal aid to local public health departments. Some of the influential Democrats have revived this idea, and are working for its passage this session. As expected, the old Truman-Ewing plan for national compulsory health insurance again is before Congress. The first one to introduce a bill along these lines was Rep. John D. Dingell, a sponsor of the original plan. Later others joined with him in backing the idea, but up to now the open support for it is not extensive on Capitol Hill.

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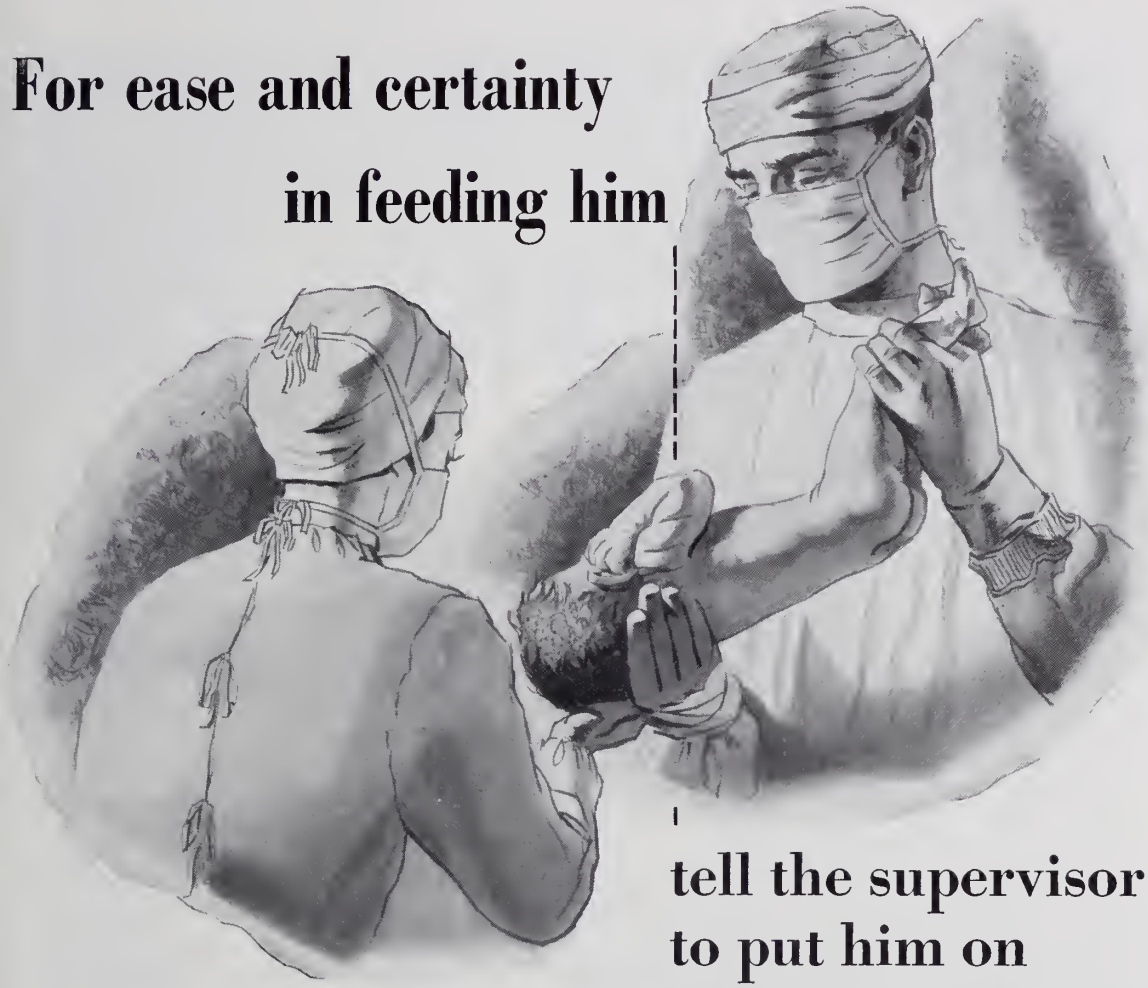

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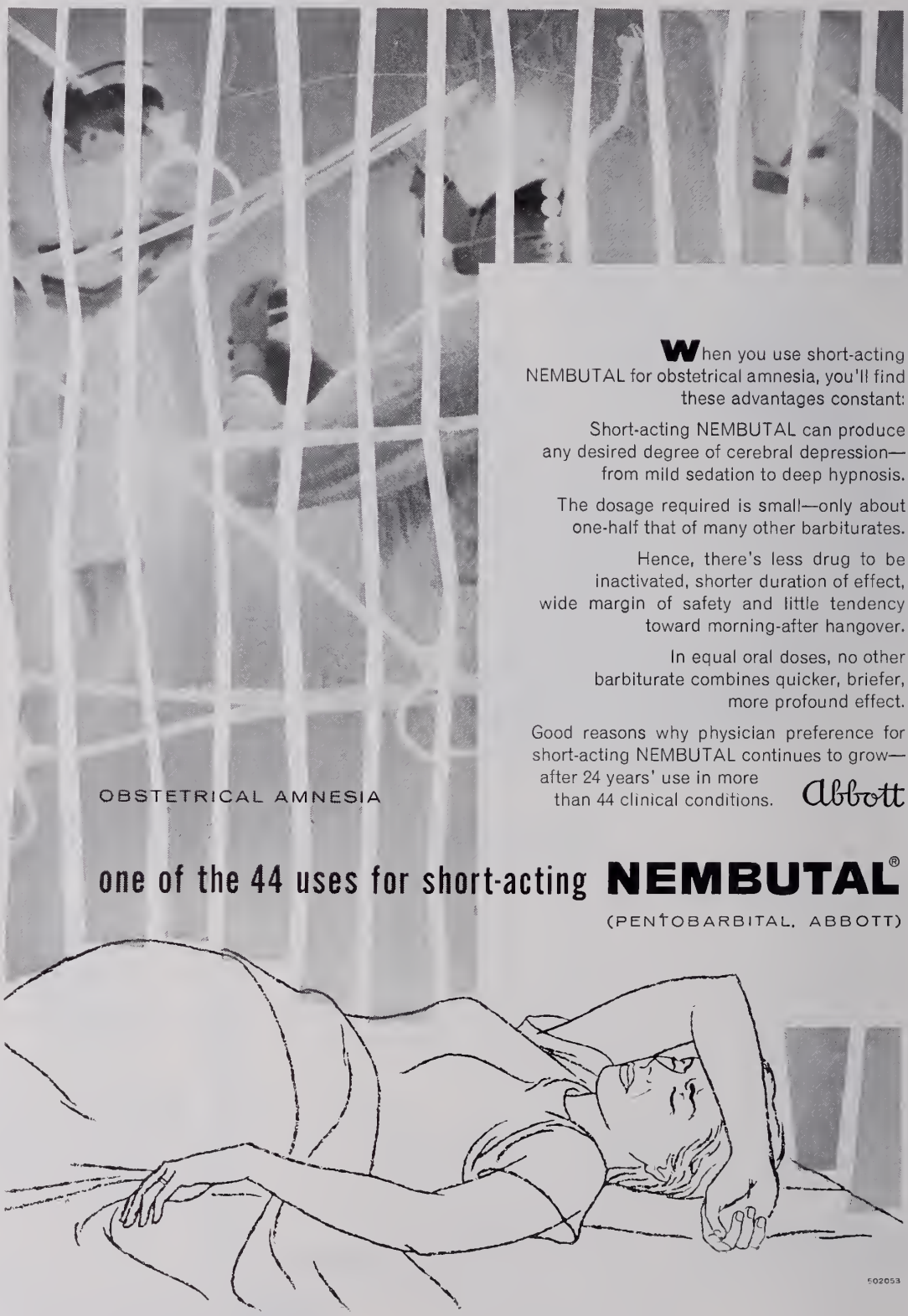
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The JOURNAL of the

Kentucky State Medical Association

Issued Monthly Under the Direction of the Council

VOL. 53 FEBRUARY, 1955 NO. 2

The Medical Management of Complicated and Uncomplicated Duodenal Ulcer*

JOHN F. GANEM, M.D.

Louisville

The duodenal ulcer patient poses an interesting problem of combined interest to the Radiologist, Psychiatrist, Internist and Surgeon, who must often work together in an effort to rehabilitate an otherwise lost soul.

To the General Practitioner, however, he is not only an interesting clinical entity, but a patient problem with many ramifications. The General Practitioner, more than anyone else, is in a position to diagnose early and to treat early. Upon him falls the responsibility for the eventual outcome of these patients.

This honor, if it can be called one, rests upon the General Practitioner largely because he is the first to see the patient. For that reason, and because of these early efforts, the duodenal ulcer patient is frequently restored to a full, useful life.

This report on my method of managing duodenal ulcer patients was prompted by the numerous reports in the recent literature on the surgical approach to the problem. All of us who have practised medicine a few years have seen some patients who have had resection or denervation and as a result have diarrhea, belching, hunger and pain. Many of us have seen some of these patients who never seem to gain weight. Occasionally we must talk to the family and try to explain why the patient expired.

These results, even in the hands of capable surgeons and meeting sound surgical indications, do nothing, in my mind, but re-emphasize that surgery is not the treatment of choice, but rather the method chosen as the last definite approach when all else has failed.

*Read before the Kentucky Chapter of the American Academy of General Practice, September 22, 1954, during the Annual Meeting of the Kentucky State Medical Association, Louisville.

Diet Regime

Once a patient has been proved by X-ray to have a duodenal ulcer, every effort must be made to impress upon him the necessity of careful and strict dieting. Questioning should be directed towards unearthing emotional problems which may be solved by an understanding and patient physician.

The following is a schedule which I have found extremely valuable in my practise:

On the first office visit the diet and medications are fully explained to the patient. The names of the various drugs are made known to him.

One tablespoonful of Maalox is taken every hour from 7 a.m. until 7 p.m. Two tablespoonfuls are to be taken at bedtime and two tablespoonfuls at 2 a.m. (I insist that the 2 a.m. dose be taken in order to neutralize the HCL in the night secretion of the stomach.)

Six (6) ounces of milk with one tablespoonful of Starlac powder (a dehydrated, high protein milk powder found in any grocery store) is taken every hour from 7:30 a.m. until 7:30 p.m.

Pro-Banthine is administered in the following dosage: 15 mg at 7 a.m., 12 noon, 5 p.m. and 30 mgs. at bedtime. At the end of one week if the patient is not relieved of pain, Pro-Banthine is increased to 30 mgs. at the above hours.

Nothing is allowed the patient except the above and water for the first four days.

Starting on the fifth (5th) day Jello, custard, cooked cereal, soft boiled eggs, and any of the strained baby foods are taken four (4) to five (5) times a day in addition to the Maalox, milk and Starlac powder.

This schedule is rigidly followed for three weeks, at which time a re-check barium swallow is done. If the re-check upper G.I. reveals a healed ulcer the patient is allowed a bland diet with spices of any type restricted; Maalox, one tablespoonful after each meal, two tablespoonfuls at bedtime and two tablespoonfuls at 2 a.m., and Pro-Banthine in the original dosage are continued for three months. If, on the other hand, the barium swallow reveals incomplete healing, or no healing, the patient is requested to follow the same schedule for three more weeks.

I have found very few patients who have not responded to this therapy, and only an occasional patient who refused to follow this plan. At the end of six weeks most patients will have healed or show definite evidence of healing. Following this six weeks of intensive therapy the patient is allowed a bland, spice-restricted diet. Maalox and Pro-Banthine are continued as in the healed ulcer, for three (3) months.

Additional Factors

There are two additional factors that I consider important in managing an ulcer patient. The first is smoking. For the past two years I have made no effort to restrict smoking. I have found little difference in the healing rate, and interestingly enough, most patients are easier to manage and will follow their diet if allowed to smoke. I feel that to restrict smoking upsets the patient a great deal and may produce a functional situation more conducive to initiating than healing of an ulcer.

The second factor is the seasonal recurrence of ulcers. It is important to note the time of onset of an ulcer episode, and to institute a modified ulcer regime two or three weeks prior to this in the hope of preventing active ulceration.

Complications

The complications I see most and in order of frequency are:

1. Obstructive duodenal ulcer.
2. Penetrating duodenal ulcer.
3. Perforated duodenal ulcer.
4. Bleeding duodenal ulcer.
5. Medically refractory duodenal ulcer.

The patient with an obstructive duodenal ulcer is a medical emergency. Lack of food complicated by electrolyte loss due to vomiting, rapidly depletes body stores. Here again, surgery should be deferred until a sound medical program indicates that the obstruction is due to cicatricial scarring, and not due to inflammatory edema.

Hospitalization is a "must" for the obstructed patient. Continuous gastric suction is started on admission with hourly doses of Maalox during the day, and every two (2) hours during the night. The Levine tube is clamped for 10 minutes after each dose. Banthine in 50 mg. doses is given every six (6) hours parenterally. Fluids high in Na, K, and CL, are given in the amount of 3,000 cc. daily intravenously. Supplemental vitamins are used in large doses.

This routine is followed for 48 hours, after which daytime suction is discontinued, and milk and Starlac powder and Maalox are administered every hour, alternating on the half hour. Strained baby foods are allowed three (3) times a day. The stomach is emptied every night with continuous suction, and Maalox in two (2) hour doses is continued.

This procedure of feeding during the day and emptying the stomach during the night is followed for several days and a barium swallow is repeated. Several days of continuous suction followed by intermittent suction of the stomach is usually sufficient to relieve or produce evidence of a decrease in an obstruction due to inflammatory edema, and following this procedure, instituting the plan of therapy as for a simple non-obstructive ulcer on an ambulatory basis produces dramatic results.

It is imperative that a barium swallow be repeated in three (3) weeks. Evidence of gastric retention at the end of four (4) hours of more than 25% is very suspicious of cicatricial obstruction which will not be benefited by further medical management. This applies more to the patient with a chronic history of a duodenal ulcer. The patient with a history of a recent involvement however, is entitled to three (3) to four (4) weeks of further therapy before failure to help is admitted.

The posterior penetrating duodenal ulcer is one which I feel responds less favorably to medical management. Here again,

therapy is identical to that used for a simple ulcer, utilizing milk, Starlac powder, Maalox and Pro-Banthine. The main point of difference is the length of time one treats these patients.

I believe that X-ray evidence of a persisting ulcer and persisting pain at the end of eight (8) to ten (10) weeks of intensive therapy is a good indication that these patients will benefit more from surgery than medical management. I will point out, however, that I have had only one or two patients who have not responded to intensive medical management.

Perforation of a duodenal ulcer is included here as a complication for which I offer nothing along the lines of medical management. The results from surgical intervention are excellent, and medical management without active participation by a surgical consultant may prove disastrous.

Blood and fear seem to go hand in hand. It seems to me that too many physicians when faced with a bleeding ulcer patient become alarmed and have a tendency to do too much.

A patient with a bleeding duodenal ulcer needs bed rest and heavy sedation. Active manipulation must be kept at a minimum. I see no reason why a patient with a suspected bleeding ulcer should be subjected to an upper G.I. while bleeding, or several hours after bleeding has stopped. Although I have no objection to the procedure itself, a negative upper G.I. does not rule out the presence of an ulcer crater. Frequently the ulcer is covered by a clot of blood and visualization is impossible.

Coffee grounds vomitus and black tarry stools indicate a bleeding ulcer until proved otherwise. Hospitalization is essential. The nurses are instructed to note the color of the elusive stool. I say elusive stool because that is the most difficult report to get in any hospital. The patient is heavily sedated and blood pressure and repeated blood counts are recorded. Fluids and blood are administered as the need arises and not routinely.

Twelve (12) to twenty-four (24) hours after bleeding has stopped, Maalox in hourly doses during the daytime is started and three (3) ounces of milk with one tablespoonful of Starlac powder are given every hour on the half hour. I see no objection to using Banthine parenterally, although I realize that some authorities do not recommend its use. However, if Banthine does decrease gastric motility and secretion then it seems logical to use it in the bleeding ulcer patient where not only physical but visceral motility must be reduced.

Several days after active bleeding has stopped, an upper G.I. is done and the patient is placed on the same plan of therapy as for the simple ulcer.

Refractory Ulcers

History of recurrent bleeding, i.e., two (2) or more bleeding episodes in any patient who has had adequate and sound medical therapy is a good indication for careful surgical evaluation. It is well to remember that massive uncontrolled hemorrhage calls for immediate and heroic surgical exploration. It has been my policy to have an understanding, not too overly anxious, surgical consultant on all bleeding ulcer cases.

Finally, I should like to discuss the file 13 of Gastroenterology, the so-called medically refractory or intractable duodenal ulcer. Refractory is defined as not yielding to therapy, or failure to heal. Although the term is good, there is a wide margin in the interpretation of just what a medically refractory or intractable ulcer really is. Over a period of several years I have observed many patients who have been classed as refractory ranging from:

(1) At the time of diagnosis.
(2) One to two weeks following medical therapy.
(3) Several weeks following a vacillating plan of dieting and medication.
(4) Appearance of new surgical techniques in the horizon.

Several years of close contact with duodenal ulcer patients has re-inforced my impression that a very small number need ever be operated on.

If every physician were to develop a sound medical plan for managing these patients few indeed would be classed as intractable or refractory. Every duodenal ulcer patient is entitled to be treated, treated and re-treated rigidly before he is classed as refractory.

Gout*

ROBERT L. McCLENDON, M.D.

Louisville

Gout is a hereditary error of uric acid metabolism occurring predominantly in males. "As a result of this derangement, a disproportionate quantity of simple nitrogen and carbon precursors of uric acid is diverted from the main metabolic channels which culminate in urea and carbon dioxide formation, to pathways leading to urate formation."

Gout is one of the oldest of known diseases. Hippocrates described characteristic manifestation of gout as podagra, cheiogra or gonagra depending on the site involved as early as the Fifth Century B. C.

The word gout is derived from the Latin "gutta" meaning a drop. This term was used in the Thirteenth Century to signify that the poison had entered the affected joint drop by drop.

Sydenham (1624 to 1689) was the first to differentiate gout from other types of arthritis. His colorful and classic description of acute gouty attacks remains unparalleled.

Garrod in 1848 showed that the blood of gouty persons contains abnormal amounts of uric acid.

In recent years investigations by Buchanan and collaborators, Greenberg, DeWitt Stetten, Gutman and others utilizing isotope labeling have clarified the metabolic pathways of purine metabolism as related to the formation of uric acid. These investigations have contributed much to the over-all understanding of gout. Of major importance was the disclosure that uric acid can be synthesized in the body directly, without intermediary incorporation into nucleic acids, from glycine, ammonia, a one carbon compound equivalent to formic acid and carbon dioxide.[2]

Incidence

Gout is not the rare malady that many have believed. It is the suspicion of gout that is rare, not gout itself. Reports on the incidence of diagnosed gout have varied widely but it is agreed by numbers of investigators that gouty arthritis accounts for at least 5% of all cases of non-surgical joint diseases and I am sure many unrecognized cases of this malady are seen by us each year.

There is approximately a 20:1 sex ratio in favor of the male.[3] In women the appearance of gouty arthritis often coincides with the development of menopause and may assume atypical forms frequently superficially resembling rheumatoid arthritis.

The diagnosis of gouty arthritis in the early attacks is usually easy in the majority of cases. The foundation stones of our diagnosis are usually three in number although several ancillary points may prove helpful.

1. The characteristic features of the acute gouty attack.
2. The characteristic elevation of serum uric acid concentration.
3. The typical response to an adequate amount of colchicine.

Several ancillary points that are helpful in the diagnosis are: the family history of gout, the presence of acute arthritis in men over the age of forty in the absence of acute trauma or recent history of gonorrhea, a history of olecranon bursitis or achilles tendonitis; the patient appears wearing a shoe cut out over the metatarsophalangeal joint of the great toe (sign of the split shoe of Hench), x-ray appearance and urate calculi.

It is wise at this point to review some of the common pitfalls that cause us to err in the correct diagnosis of gouty arthritis. A discussion of the clinical features of the acute attack will be made under the natural history of the disease.

The elevation of serum uric acid concentration or hyperuricemia is an almost invariable if not constant feature of the disease. Its presence, therefore, should be repeatedly sought for, and if not attributable to other causes constitutes prime evidence of the disease.

The determination of uric acid should be made on serum or plasma rather than whole blood since there is unequal distribution of urates between plasma and cells.

Important attention should be paid to agents which affect uric acid metabolism during the preceding 48 hours before collection of serum for this determination. Salicylates most commonly will have been

*Read before the Kentucky Chapter of the American Academy of General Practice, September 22, 1954, during the Annual Meeting of the Kentucky State Medical Association, Louisville.

injested, ACTH, Cortisone, Butazolidin and Benemid may have been taken. These agents cause an increased excretion of uric acid in the urine and may depress the serum acid concentration.

The usual methods for determination of uric acid depend upon reduction of complex tungstate reagents to colored compounds. This reaction is not strictly specific for uric acid and results may be influenced by unrelated substances present in the blood. These tests do not seem to offer undue technical difficulties but comparison of values obtained in different laboratories and office work show wide discrepancies. Only the use of carefully prepared and fresh reagents and frequent control determinations assure reliable results.

The serum uric acid value is rarely found to be lower than 6 mg.% in gout if the above pitfalls are carefully avoided. Finally it should be remembered that certain conditions other than gout may be associated with an increased concentration of uric acid in the serum such as polycythemia vera, leukemia, pernicious anemia, acute and chronic renal insufficiency and some acute infections.

The response of an acute gouty joint to colchicine in sufficient dosage is of much diagnostic significance. Other types of non-gouty joint disturbance do not respond to colchicine. It is important to stress, however, that an adequate amount of colchicine must be administered. Also it is important to remember that other anti-rheumatic agents such as ACTH, Butazolidin, Salicylates and Cortisone do not carry similar diagnostic implications.

Natural History

With these facts in mind we can now turn to the natural history of the disease. This has conveniently been divided into four phases:

1. Asymptomatic (essential) hyperuricemia
2. Acute gouty arthritis
3. Intercritical gout
4. Chronic tophaceous gout.

It is now recognized that many blood relatives of gouty patients will show essential hyperuricemia. This trait first expresses itself usually after puberty in men. Women may well have this stigma but it appears later in life and is generally less pronounced than in men. Why gouty arthritis develops in relatively few women with this genetic trait is not known.

Recognition of this characteristic during this early stage in the natural history of the disease may be of value in future diagnosis of overt gout which will occur in about 5% of these genetically predisposed individuals.

Acute gouty arthritis usually begins in men over 30 years of age. The onset of the attack is sudden, often at night. In 50% of the cases the initial joint will be the metatarsophalangeal joint. In a few hours it will swell, become extremely tender, hot and dusky red. The other joints that may be involved initially are ankle, knee, instep, heel, elbow or the small joints of the hands or wrist. The initial attack usually lasts 3 to 10 days unless prompt treatment is instituted. Complete return of function is a characteristic of the disease. Often during the acute attack there will be systemic manifestations such as gastro intestinal discomfort, fever to 101-102 degrees and a moderate leukocytosis. These systemic signs should not divert the physician to another explanation for these findings.

Intercritical Gout

With the subsidence of an initial attack of acute gouty arthritis the stage of intercritical gout has intervened. This stage may last for several years interspersed by occasional acute attacks of gouty arthritis. In many untreated cases there is a gradual and progressive shortening of the intercritical periods so that eventually only a few months will elapse between attacks. Following this increased frequency of attacks more and more residual stiffness, swelling and disability of the joint will occur and this stage will then merge into the advanced chronic tophaceous gout. Now the patient is no longer free from pain, and continual stiffness, enlargement and deformity ensue. It is in this stage that the only pathognomonic sign of gout appears and this is the presence of tophi. Tophi are found in between 25 and 50 percent of cases. Tophi are most commonly found in the helix and anthelix of the ear. Even here they may be quite inconspicuous and may be confused with sebaceous cysts, fibroid nodules and certain other chronic skin manifestations. They frequently occur in the olecranon bursa, prepatellar bursa, the tendons of the fingers and wrists. Often a most typical stigma is a hard mass at the base of the great toe. Other areas of the foot are often involved creating a characteristic gait. Another important aspect of this stage of gout is

the interpretation and management of the increased evidence of renal damage noted by persistent albuminuria, cellular casts and evidence of nitrogen retention. Often hypertension and nephro sclerosis are the presenting feature. These patients may eventually die of uremia.

It is important to realize that tophi and other subcutaneous deposits of urates may produce inflammatory reaction, may ulcerate or be associated with periarticular calcium deposits or generalized calcinosis. At this stage gout may be confused with rheumatoid arthritis and/or the presence of Heberden's nodes which characterize osteoarthritis.

Within the past three years an intensive effort has been made to screen all patients who have been diagnosed as rheumatoid arthritis in the arthritis clinic at Louisville General Hospital. To our amazement 7 patients who were receiving therapy directed against rheumatoid arthritis had unmistakable stigma of gout. Often this diagnosis had been missed because of the finding of a normal serum uric acid level. Re-evaluation of these patients by serum uric acid determination when no antirheumatic drug had been taken was responsible for the correct diagnosis in 4 patients.

The marked response to adequate amounts of colchicine clinched the diagnosis in 3 patients who later were found to have abnormal levels of serum uric acid.

Treatment

The general method of treatment will depend upon the phase of the disease. So the treatment will necessarily consider the several problems in each phase of the disease.

It is doubtful that any active therapeutic measures are indicated in persons with essential hyperuricemia who have never had acute attacks of gout. Often acute attacks never occur and if they do it will be late in life. The only potential value may lie in prudent limitation of purines in the diet and the avoidance of a high fat or alcohol intake.

In acute gouty arthritis there are general meaures such as bed rest, liberal use of analgesics to reduce pain and a trial of hot or cold compresses. Forced fluid is important.

In the past for specific therapy colchicine has been the drug of choice but at present ACTH and Butazolidin may equal or surpass colchicine in acute attacks. ACTH is effective very quickly in most gouty attacks, even the most persistent. Frequently ACTH gel in doses of 80 to 100 mg. daily for 2 to 3 days will terminate an attack; then it is usually possible to taper off the dosage, concurrently giving colchicine in small dosage of 1 or 2 mg. daily. In resistant cases IV ACTH in saline running slowly seems to be superior to IM ACTH. If ACTH is stopped too quickly a flare-up may occur. This can be prevented by concomitant administration of colchicine. If colchicine is to be given as the specific drug it is given orally in doses of 1.0 mg. every 2 hours until the attack subsides or diarrhea, nausea or vomiting ensue. Usually the total dosage will be 6 to 8 mg.

It is important to realize that in future attacks of gout the patient will respond to the same dosage level. Butazolidin in daily doses of 0.8 gm. is very effective in terminating attacks within 48 hours. Because of its toxicity it should be used with caution.

In order to prevent acute gouty attacks the interrupted administration of 0.5 to 1.0 mg. colchicine daily may be helpful. Benemid has recently come to the forefront for long term prophylactic use in doses of 0.5 to 1.0 gm. daily. It is a potent uricosuric agent without serious side effects and promises to be a very effective agent for protracted use. Its use with salicylates nullifies its effects.

It is important to avoid an excessive intake of preformed purine. Fat intake should also be limited. However, with recent evidence that uric acid may be formed from simple precursors such as glycine, ammonia, formic acid and CO2, drastic curtailment of purine intake is inadvisable because it can be accomplished only by a diet composed of a small variety of vegetables and cereals, eggs and dairy products.

Such a diet is highly monotonous and unpalatable and few patients will adhere to it. For that reason small amounts of meats, fish and seafood may be allowed. It has been uniformly advocated that there should be unqualified abstinence from alcoholic beverages. There is no real proof of the value of such abstinence. Small amounts of alcohol may be allowed.

A final word for long term treatment in chronic tophaceous gout. It has been noted that marked reduction in the size of tophi with complete disappearance may occur with persistent uricosuric therapy. Thus a more hopeful outlook would seem war-

ranted in the long term management of these tophaceous patients.

Summary

1. The clinical syndrome of gout is more prevalent than commonly realized.

2. The diagnosis is not too difficult if its presence is kept in mind.

3. Adequate therapy for the management of the acute attack seems to be at hand.

4. Because of the chronicity of chronic tophaceous gout the physician must be endowed with a sympathetic understanding and fortitude to pursue long term therapy with the hopeful attitude that the usual intractable course may now be altered with therapeutic efforts.

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Inguinal Hernia in Childhood*

RALPH M. LARSEN, M.D.

Nashville, Tennessee

In 1948, to clarify the existing controversy regarding the treatment of inguinal hernia in children, we undertook a study of all children from birth to six years of age admitted to Vanderbilt University Hospital from 1925 through 1947 for the treatment of inguinal hernia.

Diagnosis of Simple Inguinal Hernia

Although it is generally admitted that invagination of the scrotum is not a reliable method of establishing the existence of an inguinal hernia in infancy and early childhood, the great importance of the history of a recurrent reducible mass in this region, as the only evidence of the existence of the hernia, has not been properly emphasized. It should be emphasized that failure to demonstrate a hernia, even on repeated examination, does not preclude its existence.

Any demonstrable hernia can best be examined by inspection and direct palpation of the inguinal region. Demonstration of a reducible mass in this region obviously establishes the diagnosis.

The association of hydrocele of the cord or tunica vaginalis and cord with infantile hernia has not been adequately emphasized. Communicating hydroceles of the cord are compressible and are always infantile hernia; noncommunicating hydroceles of the cord are uncompressible but are associated with patent vaginal process above the hydrocele in the vast majority of instances. It is difficult to understand why this important association has not received proper emphasis in previous publications[1,2,3].

It is almost certain that a child with undescended testis will have an associated hernia whether it is demonstrable or not, and this hernia may carry with it all of the dangers of incarceration and strangulation as do the obviously demonstrable ones.

Sex Distribution of Simple Inguinal Hernia in 111 Patients

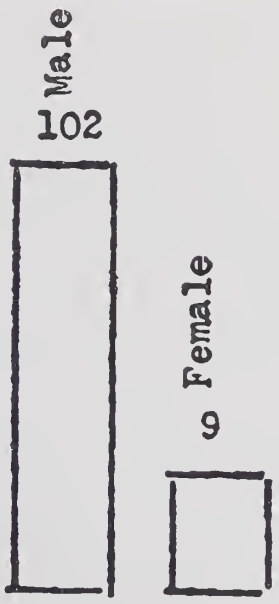


Fig. 1.—Sex distribution.

Male one hundred two; female nine. This is a ratio of one to eleven which corresponds to experience in other clinics.

*Read before the Kentucky Chapter of the American Academy of General Practice, September 22, 1954, during the Annual Meeting of the Kentucky State Medical Association, Louisville.

Age Incidence of Simple Inguinal Hernia in 111 Patients

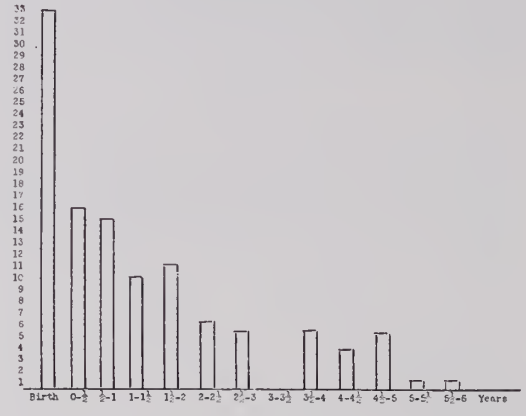


Fig. 2.—Age of patient when hernia was first discovered (111 patients).

The great preponderance of hernias present at birth, as compared to any other single age period. The vast majority of all of the hernias in this age group were demonstrable before the child was three years of age.

Lateralization in 111 Patients

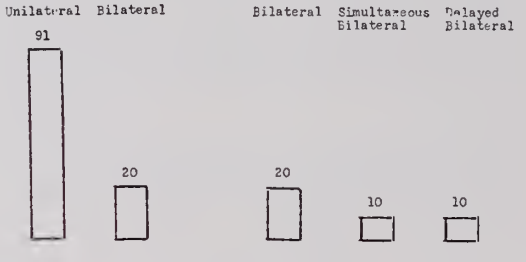


Fig. 3.—Lateralization (111 patients).

There were 91 unilateral and twenty bilateral hernias in this age group. Of the bilateral hernias, ten occurred simultaneously and ten occurred with an interval ranging from a few weeks to many years between the primary and late contra-lateral hernia.

Treatment of Simple Inguinal Hernia

Treatment of Simple Inguinal Hernia by Yarn Truss in Thirty-Six Patients.

Thirty-six patients were treated by their physician with a yarn truss in the hope of obtaining a cure of the hernia, or deferring the operative repair until the patient was five or six years of age.

The extreme to which the physician went, in carrying out this method of treatment, to avoid operation, is well illustrated by the two patients who were subjected to general anesthesia for irreducible incarceration before admission to Vanderbilt University Hospital.

Four of the thirty-six patients, two male and two female, were apparently cured of their hernia. Two of these, who had hernias present at birth, were treated by a truss for two and fifteen months. They were followed for fifteen and seventeen years, respectively, without evidence of recurrence. One, with onset at age of three months, was treated by truss for eighteen months and was followed to 1948 with an apparent two-year cure. One, with onset at age of forty-four months, wore a truss seven years and was followed to 1948 with an apparent twenty-year cure. The term apparent is advisedly used. The incidence of very late recurrence, especially of the infantile type hernia, apparently cured spontaneously, or by truss, is well known to us.

In thirty-two patients the truss, even when carefully applied, failed to retain the hernia continuously, although the truss was worn continuously except when changed for washing the child or the truss, or to replace a prolapsed hernia.

In eighteen patients, despite the truss, the hernia progressively increased in size. In fourteen patients repeated incarceration occurred. In six patients irreducible incarceration occurred while the truss was being worn.

All thirty-two of the patients, not apparently cured by the truss, came to operation. Sixteen were four or more years of age when the operation was finally advised.

One child wore a truss fourteen years. He developed atrophy of the testis.

Treatment by truss offers at best a very low incidence of apparent cures when one

TABLE I. TREATED BY YARN TRUSS

NUMBER	INFANTILE	SIMPLE	BILATERAL	HYDROCELE	AGE AT ONSET	DURATION OF TRUSS	RETAINED	INCREASE IN SIZE	REPEATED INCARCERATION	IRREDUCIBLE INCARCERATION	ATROPHY OF TESTICLE	DURATION OF APPARENT CURE	SUBSEQUENT OPERATION
118553	L				54 mo.	5 mo.	No	Yes	No	No	No		60 mo.
151069	R			C.	Birth	10 wk.	No	Yes	No	No	No		10 wk.
151069	L				Birth	8 mo.	No	Yes	No	No	No		8 mo.
131506		R			Birth	8 mo.	No	No	Yes	No	No		24 mo.
127851		R			6 mo.	18 mo.	No	No	No	Yes	No		24 mo.
144688	R				Birth	72 mo.	No	Yes	Yes	No	No		72 mo.
4555		R			12 mo.	12 mo.	No	No	No	No	No		48 mo.
10772	L	R			24 mo.	48 mo.	Yes	Yes	No	No	No		72 mo.
22678	R				Birth	48 mo.	No	Yes	No	No	No		18 mo.
30376		L			24 mo.	12 mo.	No	Yes	No	No	No		72 mo.
45629		N	X		3 mo.	45 mo.	No	Yes	Yes	No	No		60 mo.
45780		L			59 mo.	1 mo.	No	Yes	No	No	F.		60 mo.
24427	R				Birth	14 yr.	No	Yes	No	No	Yes		16 yr.
103331	L				Birth	60 mo.	No	No	Yes	No	No		60 mo.
54786		R			12 mo.	48 mo.	No	No	Yes	No	No		60 mo.
22220	R				Birth	15 mo.	No	No	No	No	No	17 yr.	
31925	L				Birth	2 mo.	Yes	No	No	No	F.	15 yr.	
142711		L			3 mo.	18 mo.	Yes	No	No	No	F.	2 yr.	
103407	R				9 mo.	15 mo.	No	No	No	No	No		24 mo.
153184	L				Birth	9 mo.	No	No	Yes	No	F.		9 mo.
140414	R			C.	28 mo.	8 mo.	No	Yes	Yes	No	No		36 mo.
52865	R	L			2 mo.	18 mo.	No	Yes	Yes	No	No		20 mo.
53039		R			13 mo.	1 mo.	No	Yes	Yes	Yes	No		17 mo.
115151	R			N.C.	3 mo.	16 mo.	No	No	Yes	No	No		19 mo.
102439	R			N.C.	24 mo.	12 mo.	No	Yes	No	No	No		36 mo.
93147		L			Birth	18 mo.	No	No	No	No	No		36 mo.
85375		R			48 mo.	24 mo.	No	No	No	No	No		72 mo.
54216		R			7 wk.	3 wk.	No	No	No	Yes	No		10 wk.
92342		R			36 mo.	36 mo.	No	Yes	Yes*	No	No		72 mo.
87992		R			Birth	13 mo.	No	No	Yes	Yes	No		24 mo.
81375		R			22 mo.	2 mo.	No	No	Yes*	Yes	No		30 mo.
4777	R				44 mo.	7 yr.	Yes	No	No	No	No	20 yr.	
21208	L				Birth	48 mo.	No	Yes	No	No	No		48 mo.
54101		R			10 mo.	6 mo.	No	Yes	No	No	No		60 mo.
395		X	X		12 mo.	12 yr.	No	Yes	Yes	No	No		20 yr.
131066		R			15 mo.	1 mo.	No	Yes	No	Yes	No		16 mo.
36	18	22	4	4			32 No	18 yes	14 yes	6 yes	1 yes	4 yes	32 yes

* Previously reduced under general anesthetic elsewhere.

deducts the number of spontaneous apparent cures. If used at all, the truss should have a single purpose, the prevention at all times of prolapse of intra-abdominal content into the hernia sac, without injury to the contents of the inguinal canal. In our experience this is a practical impossibility, and the resultant prolapse into the hernia sac carries with it the same hazard of irreducible incarceration as is encountered in the much larger group not treated by a truss.

Even when a yarn truss is employed, atrophy of the associated testis may occur.

The extraordinary emotional strain exerted on the parents by fear of incarceration, awareness of genital anomaly, and filth induced by the truss, create an environment for the patient which often results in irreversible abnormalities in emotional stability.

For these reasons we have not recommended the truss in the therapy of inguinal hernia in infants and children since 1938.

Operative Treatment of Simple Inguinal Hernia

Of the 111 patients in the age group studied, 101 were operated upon for 119 inguinal hernias. One hundred eight of the herniorrhaphies were performed in the Vanderbilt University Hospital; eleven were done elsewhere. The eleven done elsewhere were in patients past six years of age when operated upon. Four of those, past six years of age when operated upon, had very late contra-lateral operations, and were not included in this study.

Since 1938 it has been our policy to recommend herniorrhaphy for inguinal hernia in infants and young children as soon as the diagnosis has been established.

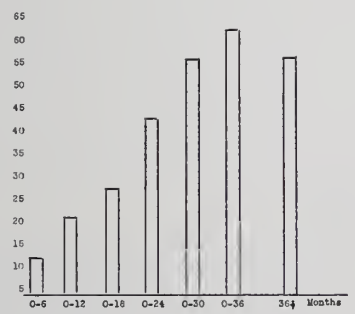


Fig. 4.—Number of herniorrhaphies done from birth to 3 years of age compared to number of herniorrhaphies done on patients 3 years of age and over. Compare with Fig. 2.

Number of Herniorrhaphies Done from Birth to Three Years of Age Compared to Number of Herniorrhaphies Done on Patients Three Years of Age and Over.

In the case of the newborn infant, the recommended herniorrhaphy has been deferred until the child has regained his birth weight.

In the presence of intercurrent disease in the patient, or a severe epidemic of respiratory disease, the herniorrhaphy has been deferred until the child has recovered from the illness or the epidemic terminated.

It must be emphasized that the preadmission disposition of most of the patients herein reported was not determined by us but by the patient's own physician.

Although the preadmission attitude toward operation resulted in a long interval between onset of the hernia and operation in many instances, ten percent of the herniorrhaphies were done in infants under six months of age, over eighteen percent were done on children in the first year of life, and over fifty percent of all herniorrhaphies were done on children under thirty-seven months of age. This constitutes a sufficient number in each age group to draw definite conclusions as to the safety and efficacy of herniorrhaphy.

There were 115 herniorrhaphies carried out without postoperative infection, residual hydrocele, testicular atrophy, or recurrence. There was one anesthetic death, thought to be due to ventricular fibrillation.

It will be noted that 107 of the herniorrhaphies were radical cures by the Ferguson method. Fifty-two of these were done for infantile hernia. Although an associated bottle operation was done on twenty-two of these patients, six with non-communicating and two with communicating hydrocele, no associated procedure was carried out on the scrotal contents in thirty of the fifty-two patients with infantile hernias, five of whom had communicating hydrocele and two of whom had non-communicating hydrocele associated. It follows that in the cure of infantile hernia, with or without associated hydrocele, whether communicating or not, it is unnecessary and undesirable to perform an associated bottle or similar type operation on the coverings of the scrotal cord and testis. The hernia sac should be simply bisected in the inguinal canal or through the upper end of the hydrocele, after which the upper portion of the sac is freed and ligated above the neck and the redundant portion excised. The lower portion of the sac should be disregarded.

It is further noted, from Figure 5, that there were eight simultaneous bilateral

herniorrhaphies performed, as compared to six delayed contra-lateral herniorrhaphies. Although we are convinced that contamination of the properly closed wound by urine, etc., can only rarely result in infection, we are well aware of the hazard of contamination during the process of operation. Although there were no instances of infection in our series, in a decision involving bilateral simultaneous herniorrhaphy the danger of accidental contamination in a young child or infant must be seriously weighed against the advantages, principally economic, to be gained by a simultaneous bilateral herniorrhaphy. Where practical, we advised an interval of four to six weeks between herniorrhaphies when bilateral hernia coexisted in this series.

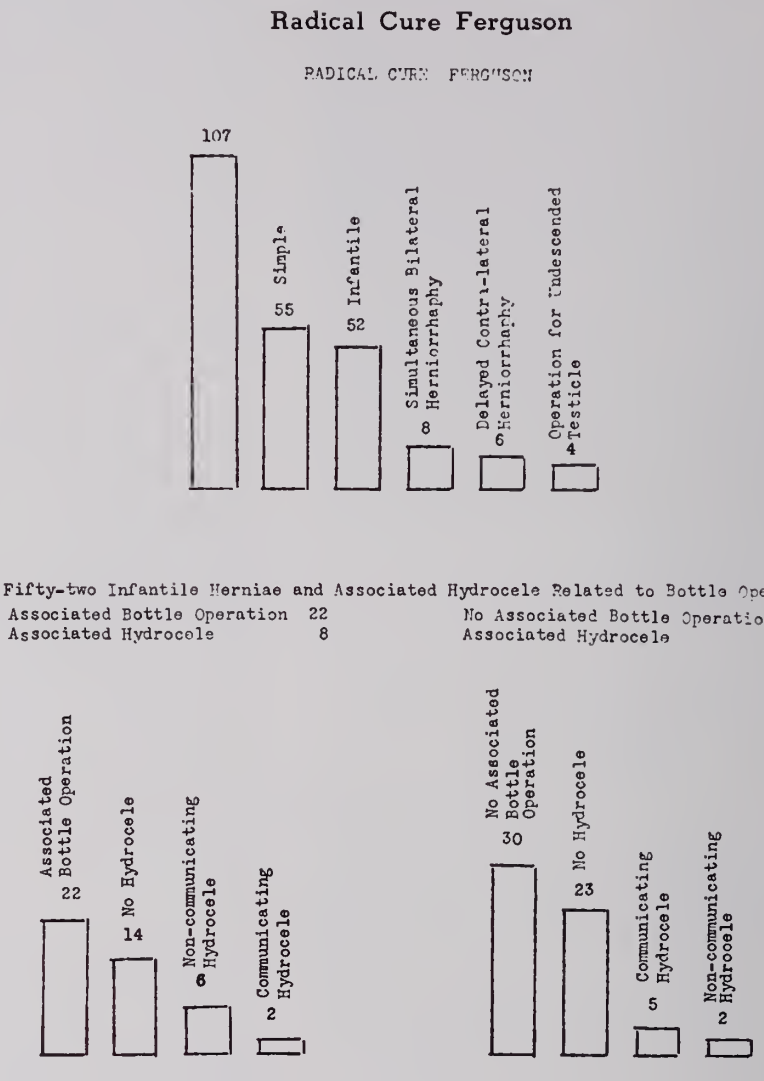


Fig. 5.—Type of procedure carried out.

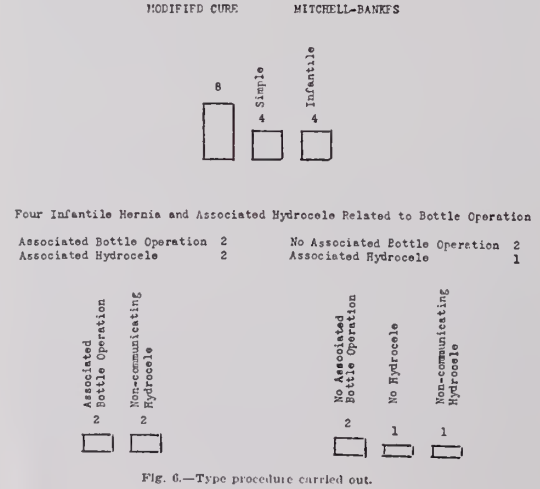


Fig. 6.—Type procedure carried out.

There were eight herniorrhaphies carried out by the Mitchell-Bankes method. Four of the hernias repaired by this method were infantile; in two of which an associated bottle operation was performed, and in the remaining two no associated procedure was carried out on the coverings of the scrotal cord or testis. All the patients were cured and there was no postoperative residual hydrocele or testicular atrophy.

The simplicity of this procedure makes it ideal for the treatment of simple hernia, especially simultaneously present bilateral hernia. When dealing with an infantile hernia with a residual space in the scrotum, we have generally reconstructed the inguinal region by the Ferguson method. The few additional sutures to carry out this procedure, in an infant or young child, add very little time and trauma to

the operation. It is an indispensable step in the associated operation for undescended testis.

Postoperative Follow-Up

One hundred one patients were operated upon to perform 119 herniorrhaphies. All but six of these patients were followed until September, 1947. Four late contralateral operations were done elsewhere.

Duration of Follow-Up: Follow-up studies were carried on for more than twenty years in two patients, fifteen to twenty years in eleven, ten to fifteen years in sixteen, five to ten years in eighteen, one to five years in thirty-nine, and less than one year in twenty-one. Follow-up could not be done on eight hernias in six patients.

Results of Operations

Ferguson: The Ferguson procedure was used for 107 herniorrhaphies, including thirty radical cures for infantile hernias without bottle operation, and four associated operations for undescended testis. The results were (1) no postoperative infections, (2) no postoperative hydrocele, (3) no atrophy of testis not present before operation, (4) one death, anesthetic, (5) no recurrence.

Mitchell-Bankes: The Mitchell-Bankes procedure was used for eight herniorrhaphies. The results were (1) no postoperative infections, (2) no postoperative hydrocele, (3) no atrophy of testis not present before operation, (4) no recurrence.

Treatment of Incarcerated Inguinal Hernia

Since it is impossible to predict the degree of ischemia on the basis of the time factor alone, and since incarceration is frequently brought about by an inflammatory reaction above or within the sac, we are unalterably opposed to the preliminary packing period and attempts at reduction of incarcerated hernia as recommended by Ladd and Gross[1], Thorndike and Ferguson[3], and others.

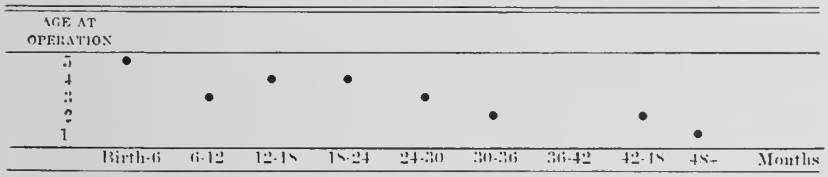
We have always regarded incarcerated hernias as extreme emergencies. For practical purposes they are all strangulated.

We have, therefore, carried out immediate herniorrhaphy under ether anesthesia without preliminary attempts at reduction when an inguinal hernia has become acutely painful, tender, or firm, whether or not associated with signs or symptoms of intestinal obstruction.

In our series there were twenty-four incarcerated hernias. It is noteworthy that 87.5 percent of all incarcerated hernias in our series occurred in children under three years of age and that 33 1/3 percent of all incarcerated hernias occurred in children under thirteen months of age.

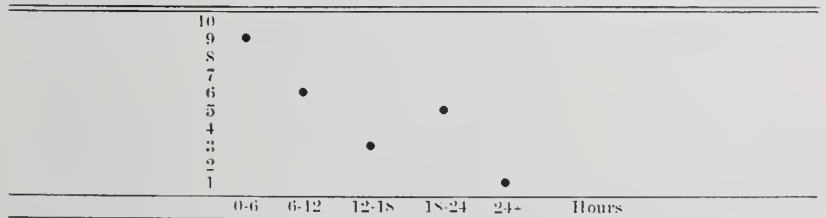
Some of these patients had been subjected to prolonged and forceful attempts at reduction prior to admission to Vanderbilt University Hospital. There was no attempted reduction after admission. All were operated upon as soon as the child could be prepared and the operating room made ready.

TABLE IV. DISTRIBUTION OF TWENTY-FOUR INCARCERATED IRREDUCIBLE HERNIAS



5 under 6 mo.
8 under 12 mo.
12 under 18 mo.
16 under 24 mo.
19 under 30 mo.
21 under 36 mo.
Six were wearing truss at time of incarceration.

TABLE V. DURATION OF INCARCERATION IN TWENTY-FOUR HERNIAS



S, Spontaneous reduction under anesthesia.
2, Acute appendicitis causing incarceration.
1, Gangrene, resection of tube and ovary.

TABLE VI. REDUCTION OF INCARCERATED IRREDUCIBLE HERNIA

NUMBER	REDUCTION
8	Reduced spontaneously under anesthesia
4	Bowel so badly strangulated as to require packing, but viable
1	Resection of straugulated mass required
1	Incarceration due to acutely inflammed appendix in sac
1	Incarceration due to inflammatory reaction associated with acutely inflammed appendix (ruptured) just above neck of sac

All operations were done under ether anesthesia. Eight reduced spontaneously under anesthesia. Because of the prolonged duration of the incarceration, one of these had an associated exploratory laparotomy. In four the bowel was badly strangulated and required prolonged packing to establish its viability. In one, resection of the strangulated mass was required. In one, the incarceration was due to an inflamed appendix in the sac, and in one other the incarceration was due to an acutely inflamed appendix just above the neck of the sac, and after repair of the hernia the appendix was removed through a new incision.

Although the inguinal structures were edematous, all structures could be identified, and a satisfactory repair was carried out in each instance. There was no postoperative infection and there have been no recurrences.

Undescended Testis

This study includes seventy-three patients admitted to Vanderbilt University Hospital from 1933 through July, 1954.

In sixty-two of these patients the undescended testis was unilateral. In eleven patients the undescended testes were bilateral, making a total of eighty-four undescended testes in the series studied.

Of the sixty-two patients with unilateral undescended testis, twelve were abdominal, thirty-eight in the canal, and twelve at the external ring. Seven of the abdominal testes were atrophic, eleven of the testes in the canal were atrophic, and four of the testes at the external ring were atrophic preoperatively. Thus of the sixty-two patients, twenty-two had grossly demonstrable preoperative testicular atrophy. The percentage of atrophy of the abdominal testes was somewhat higher

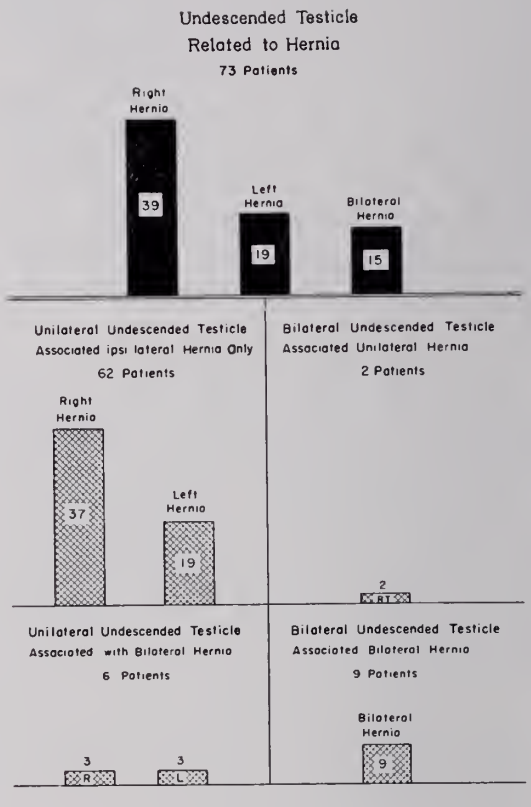


Figure 7

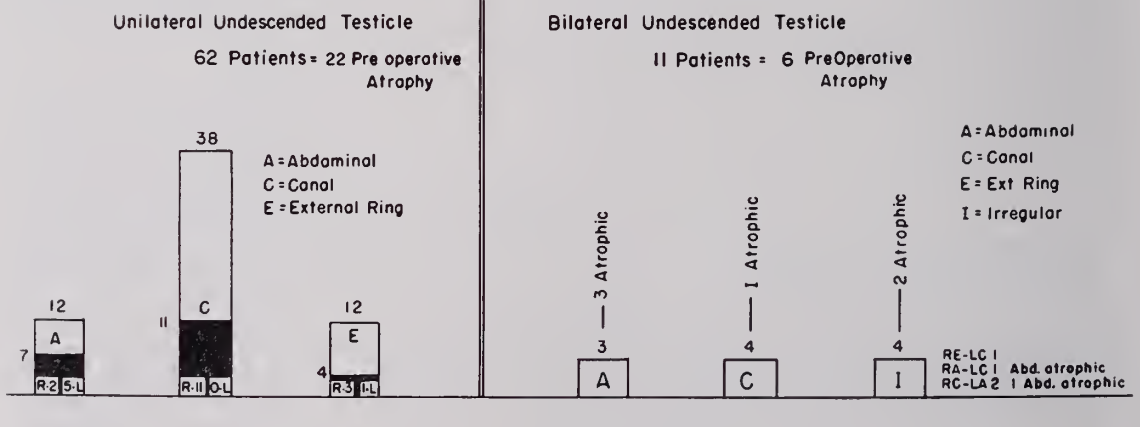


Figure 8

than for testes in the canal or at the external ring.

Of the patients with bilateral undescended testes, three were abdominal, four in the canal, and four irregular. Thus in eleven patients with bilaterally undescended testes, accounting for twenty-two undescended testes, six had grossly demonstrable preoperative atrophy of the testis.

Indications for Operation

The indications for operation for undescended testis are threefold. First, those that relate to the hernia, which almost universally accompanies an undescended testis. Second, those that relate to the parenchyma of the testis itself. And, third, those that relate to the serious emotional disturbance which commonly accompanies awareness of the genital anomaly by the patient and his companions.

Whenever the accompanying hernia becomes effective, regardless of the age of the patient, the hernia should be repaired. Even the most extensive mobilizing procedure can be carried out on the vas and vessels in the young infant with safety and with the reasonable expectancy of an excellent result, both from the standpoint of the hernia repair and the transposition of a viable testis into the scrotum. Certainly incarceration, in an effective hernia, associated with undescended testis, is a clear indication for immediate intervention. Although one might defer the plastic portion of the operation, under such circumstances, for a secondary operative procedure, generally the dissection has been so extensive to accomplish reduction of the incarcerated hernia that very little need be added in order to gain the maximum viable length of the funiculus, in the course of the same operation. From the standpoint of the hernia, therefore, the age at which operation should be done is related primarily to the time the hernia becomes effective, that is as soon as prolapse of the intra-abdominal content can be shown to occur, or, by the very size of the hernia, can reasonably be expected to occur.

The indications related to the parenchyma of the testis itself are twofold:

1. Spermatogenesis is known to be impaired or absent in the great majority of intra-abdominal and many canalicular testes, and may be restored when the testis is successfully transported to the scrotum.

2. The incidence of neoplasm of the undescended testis is well known. Although it cannot be proved that converting the undescended testis into a scrotal testis will eliminate the possibility of neoplasia, in this already abnormal testis, the scrotal testis can and should be repeatedly followed for changes which would indicate neoplasia during the early phase of the disease.

The third, and perhaps the most important indication for operation on patients with undescended testis, is the profound emotional disturbance which the undescended testis creates in the patient when he and his companions become aware of his genital anomaly. In our own experience, when the child first attends school he is inevitably exposed to observation on the part of his male companions. The unrestrained curiosity of childhood and the almost cruel frankness of young children emphasize the patient's abnormality with at times disastrous results to his personality. For this reason, even though the associated hernia is not effective and although an occasional undescended testis is known to descend as late as the prepubescent period, we believe that the undescended testis should be brought into the scrotum prior to the time the child starts public school.

The present study would indicate that surgeons have given relatively little consideration to these latter two extremely important indications for correction of undescended testis.

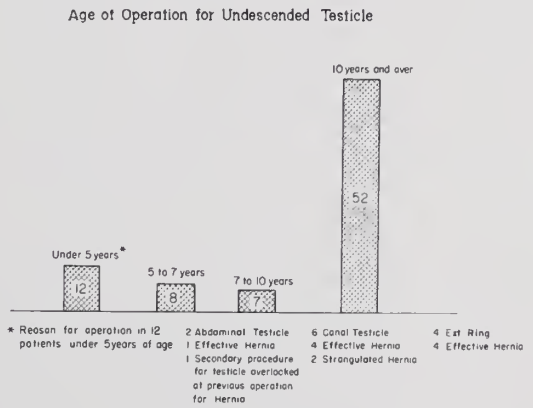


Figure 9

It will be noted that only twenty patients were operated on under seven years of age, whereas fifty-two patients were ten years and older before operation was undertaken. Of the twelve patients under five years of age when operated upon, nine were operated upon for effective

hernias, two for strangulated hernias, and one because the testis had been overlooked at a previous operation and accidentally converted into an abdominal testis.

Treatment of Undescended Testis, Non-Operative

It is not the purpose of this paper to discuss the hormonal treatment of true undescended testis, nor to evaluate the numerous published reports of the results of treatment of undescended testis by thyroid extract, antuitrin S, etc. Our own results, in carefully controlled cases, have been so discouraging that, except for unusual cases, we have dispensed with this method of treatment.

Treatment of Undescended Testis, Operative

Seventy-Three Patients, Eighty-Two Operations

Five principal type operations were employed in the treatment of undescended testis in this series.

1. Freed intra-abdominally, canal and ring:

In this operation the entire scrotum, upper thighs, and abdomen are prepared and draped preoperatively. The usual inguinal incision is carried out paralleling Poupart's ligament. External oblique is opened. The hernia sac is isolated and the sac opened. The sac is then freed of all connection up to and including the internal ring. The sac is then bisected just distal to the internal ring and the proximal peritoneum closed by silk sutures. The stump is not anchored. The vas is then carefully dissected upward through the internal ring where it diverges from the blood vessels as it passes downward and medially into the pelvis to the region of the seminal vesicles. By exerting gentle traction on the vas it may be freed intra-abdominally as far as the vesicle by gentle digital dissection, usually without division of the transversalis fascia in the floor of the canal. The vessels are then freed intra-abdominally, by careful digital dissection, making gentle traction on the funiculus. The digital dissection may be carried as far as the spine extraperitoneally without any difficulty whatever. If the internal ring is large, or has been enlarged in order to accomplish this dissection, it should be snugged up to the vessels and vas by

Type Operation	Type Hernia Repair	Location Testicles	Anchored	Traction	Infection	PO Testicle Down	Late Result: Complete Atrophy Testicle	Late Result: Testicle Smaller than	Late Result: OK Hernia	Follow up in Years: Over 1	Follow up in Years: Under 1	Follow up in Years: Not F	
Freed intra-abdominally Canal and Ring	10 F	Abdominal 10	2	1	0	10 yes	None	7	9	4	5	1	2 {Secondary Operation, Some procedure, Excellent Result
	18 F	Canal 18	3	0	0	17 yes	None	7	17	13	4	1	
	1 F	Ext Ring 1	0	0	0	1 yes	None	1	1	1	0	0	
Freed at Internal Ring Canal + Inversion Procedure	1 F	Abdominal 1	1	0	0	1 yes	None	N.F	N.F			1	
	5 F	Canal 5	2	1	0	5 yes	None	3	4	3	1	1	
		Ext Ring 0											
Freed at Internal Ring And Canal	1 F	Abdominal 1	0	0	0	1 yes	None	1	1 OK	1			
	1	Canal 1	1	0	0	1 yes	None	0	1 OK	1			
		Ext Ring 0											
Freed in Canal	2 F	Abdominal 2	0	0	0	2 U.S.	None	1	2 OK	1	1		
	17 F	Canal 17	8	4	0	13 yes 4 U.S.	None	4	11 OK	8	3	6	
	10 F	Ext Ring 10	3	1	0	7 yes 3 U.S.	None	3	9 OK	4	5	1	
Amputated *	1 F	Abdominal 1			0				1 OK			1	Could not be brought to Int R
	7 F	Canal 7			0				7 OK			7	1 Seminoma - 6 should not have been amputated
	2 F	Ext Ring 2			0				2 OK			2	*2 Should not have been amputated
Not operated **	5 F	Abdominal 5			0				5 OK			5	4 Overlooked at operation
	1 F	Canal 1			0				1 OK			1	Testicle implanted abdomen
		Ext Ring 0											
	82 (Ferguson)	10 Amputation 8 Not Nec 1 Seminoma 1 Could not be Brought to Internal Ring	20	7	0	56 yes 9 US (1 upper scrotum) 65	None	27	71			11	

1) Testicle which is well down in scrotum p.o. at 6 mos. may be high in the scrotum then in the next 6 months descend well down into scrotum (6 cases)

2) In 4 young children with small undescended testicle, the atrophic testicle has gradually increased in size over a period of years to equal the opposite testicle

3) 2 abdominal testicles (1 maximal intra abdominal freeing could only be brought to the external ring at first operation. Secondary operation brought them both well down. both testicles are grossly normal

* 4) 8 Testicles were unnecessarily amputated. All revealed marked atrophy on histological examination

** 5) 4 Testicles (canal or abdominal) overlooked at operation for hernia. One deliberately converted into abdominal testicle

Table VII

suturing the upper outer portion of the ring.

If sufficient length has now been obtained to place the testis in the scrotum, an aditus should be made into the scrotum in the interval between the symphysis and the pubic tubercle. The scrotum then brought into direct vision, should be over-distended digitally making a nidus for the testis. The testis is then placed in the over-distended scrotum, after which the Cremaster is rolled under arched fibers and conjoined tendon and the usual Ferguson repair carried out. If sufficient length has not been obtained to place the testis through the internal ring, it should be amputated. If the testis can be brought through the internal ring, but not beyond the external ring, the scrotal portion of this procedure should be omitted, the testis allowed to remain at the level of the external ring and the Ferguson procedure carried out. After an interval of one year the same procedure should be repeated.

This primary operation was carried out for ten abdominal testes, eighten testes in the canal, and one testis at the external ring. It was possible to bring the testis well into the scrotum in all but one instance and this testis was subsequently brought well down into the scrotum by a secondary operation of this same type. One other patient (primary operation elsewhere) was also subjected to a secondary operation of this same type and the testis brought well down into the scrotum.

Only two of this group of twenty-nine patients could not be followed. Eighteen were followed for one or more years, nine for one year or less.

In no instance was there postoperative infection. In no instance was there recurrence of the hernia. In no instance was there complete atrophy of the testis. The testis was smaller than normal in fifteen of the twenty-seven cases followed.

2. Freed at internal ring, canal and inversion procedure carried out.

In this procedure the scrotum, penis, and abdominal wall were prepared and draped so that the scrotum could be exposed during the course of operation. The usual inguinal incision was carried out. The external oblique was opened and the hernia sac exposed. The sac was then freed from the surrounding structures, bisected just distal to the neck and the proximal stump was ligated but not anchored. Vas and vessels were then carefully freed in the immediate vicinity of the internal ring and mobilized throughout the course of the canal. The fascial connections, between the vas and vessels at the loop, were then divided, between these structures and the epididymis, so that the testicle could be inverted.

A nidus was created in the scrotum, the testis placed in the scrotum and the usual Ferguson procedure carried out.

This operation was carried out on one patient with abdominal testis and five patients with testis in the inguinal canal. In each instance the testis was brought well into the scrotum by this procedure. There was no instance of complete postoperative atrophy, infection or recurrence of the hernia in the four patients who were followed. The patient with the abdominal testis could not be followed. Three of the patients with testis in the canal were followed for over one year. One was followed for less than one year and one could not be followed. Of the three which were followed the testis was smaller than normal postoperatively.

3. Freed at the internal ring and in the inguinal canal.

In this operation the scrotum, penis, and lower abdomen were prepared and draped. The usual inguinal incision carried out. The external oblique was incised and the hernia sac exposed. It was completely freed, bisected just distal to the internal ring and the proximal portion ligated but not anchored. The funiculus was then carefully freed up from all structures in the canal and around the internal ring, after which a nidus was prepared in the scrotum. The testis was placed in the scrotum and the usual Ferguson procedure carried out.

This operation was carried out on one abdominal testis and one testis in the inguinal canal. Both of these were followed for over one year. Postoperatively the testis was well down in each case. There was no postoperative infection. There was no complete atrophy of the testis. There has been no recurrence of the hernia. The original abdominal testis is smaller than normal.

4. Freed in the inguinal canal only.

In this operation the upper thighs, scrotum, penis, and abdomen are prepared. A usual inguinal incision is made, the external oblique is opened, and the entire hernia sac freed up in the

canal. The funicular structures are cleaned up. The hernia is bisected at the neck and the proximal portion ligated but not anchored. The lower funiculus is then mobilized, as is the testis. A nidus is made by over-distending the scrotum and the testis introduced into the scrotum.

There were two abdominal testes operated upon by this method, neither of which were anchored in the scrotum. Postoperatively the testes were high in the scrotum in both. There was no complete postoperative atrophy. The testis was smaller than normal. One of the patients was followed for over a year and one for less than a year. There was no recurrence of the hernia.

Seventeen patients in this group, with the testis in the canal, were operated upon. Eight of these were anchored and four of the eight subjected to traction. In thirteen the testis was brought well down into the scrotum. In four the testis remained high in the scrotum after operation. Eleven of the seventeen patients were followed. Of these eleven none had complete atrophy. In four the testis was smaller than its opposite. There was no recurrence of the hernia. Eight were followed for one or more years, three for under one year. Six could not be followed.

There were ten patients with the testis at the external ring. Three of these were anchored. One was subjected to traction. Each was brought well down. Three of them remained high in the scrotum. Nine of the patients were followed. There was no complete postoperative atrophy. In three the testis was smaller than the opposite testis. There was no recurrence of the hernia. Four were followed for over one year and five for under one year.

5. Amputations.

There were ten undescended tests in this group, one with abdominal testis, seven with testis in the canal, and two with testis at the external ring. The abdominal testis, after complete intra-abdominal freeing of the vessels as far as the spine; and the vas as far as the seminal vesicles, could not be brought through the internal abdominal ring with its blood supply intact. Since the opposite testis was normal, this testis was correctly amputated.

One of the patients, with testis in the canal, contained a seminoma. It, together with the funiculus, was widely amputated.

The remaining six were not given the advantage of freeing at the internal ring and intra-abdominal freeing which almost certainly would have brought the testis through the external ring. They, therefore, were erroneously amputated.

The two testes at the external ring should obviously not have been amputated.

In these ten patients routine Ferguson herniorrhaphies were carried out and there were no recurrences of the hernia. All testes were histologically atrophic.

6. Testis not operated upon.

Five abdominal testes were overlooked in patients who were subjected to herniorrhaphies. One testis in the canal was deliberately converted into an intra-abdominal testis because it could not be brought down into the scrotum.

Recapitulation

1. There were eighty-two Ferguson herniorrhaphies carried out for the hernia associated with undescended testes. There were no postoperative infections. There were no recurrences in the seventy-one patients who could be followed.

2. There were sixty-six plastic procedures carried out for undescended testis. The testis was successfully brought well down into the scrotum in fifty-seven instances. Two of these were brought down only after a secondary operation.

In nine cases the testis was brought only to the upper scrotum because the operative procedure was inadequate. These may descend spontaneously but, if not, should be subjected to an adequate secondary operation.

Of the sixty-six plastic operations for undescended testis, we were able to follow postoperatively fifty-five. In twenty-seven of these the testis was smaller than its opposite but there was no complete testicular atrophy. It will be recalled that in the total group of eighty-four undescended testes, there were thirty instances of grossly detectable preoperative atrophy. When one considers that all the amputated testes revealed unquestionable atrophy microscopically and that the undescended testis frequently cannot be compared in size and consistency to its fellow until after it has been brought down into the scrotum, it seems highly probable that the actual incidence of preoperative testicular atrophy or underdevelopment is far more frequent than recognized by the operating surgeon who usually draws his conclusions from the single testis which

he has exposed. In general, if atrophy is associated with impairment of blood supply, it tends to be complete so far as the parenchymatous tissue is concerned. There was no instance of complete atrophy following even the most extensive mobilization of the vas and vessels in any of the procedures employed.

3. Anchoring the testis to the scrotum, with or without the application of traction, is an unnecessary, and, therefore, undesirable procedure. Anchoring and reasonable traction apparently do not increase the incidence of complete atrophy but they will not bring an incompletely mobilized undescended testis well into the scrotum, if adequate funicular length has not already been obtained by the operative procedure employed.

Summary

1. The truss should not be employed in the treatment of inguinal hernia in infancy and early childhood. The cures are rare, the danger of the hernia is not diminished, the fear of the hernia by the parent and the inefficacy and filth of the truss result in an environment that produces profound emotional disturbances in both the parents and the child.

2. Compressible hydroceles of the cord or cord and tunica vaginalis are communicating hydroceles and are always infantile hernia.

3. Noncompressible hydroceles of the cord or cord and tunica vaginalis are noncommunicating hydroceles and in eighty percent of our cases were accompanied by a definite hernia of the upper portion of the vaginal process.

4. Hernia in infants and young children should be treated by operation. Operation should not be deferred because of the age of the patient.

5. It is unnecessary and undesirable to carry out associated bottle or other operations on the coverings of the scrotal cord and testis when doing a herniorrhaphy for infantile hernia, with or without associated hydrocele.

6. Incarcerated hernia should be operated upon immediately without attempts at reduction.

7. Operation for undescended testis should be carried out as soon as the associated hernia becomes effective, regardless of the age of the child.

8. Operation for undescended testis should be carried out whether the co-existent hernia is effective or not prior to the time the child attains school age.

9. The basic requirement in the treatmen of undescended testis is the acquisition of sufficient length of the funiculus to place the testis in the scrotum without traction or fixation. If this cannot be accomplished in one stage, but the testis can be brought through the external ring at the first operation, it may then be brought well into the scrotum by a secondary procedure.

10. If, in spite of maximum mobilization, the testis cannot be brought through the internal ring, and if the opposite testis is normal, it should be amputated.

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The lower incidence of high blood pressure in certain native tribes might not be due to the "simple" lives these people live, but to their low salt intake, according to a report in the October issue of Archives of Internal Medicine, published by AMA. It could be that the habit of automatically sprinkling salt on food before tasting it is responsible for the high incidence of hypertension in western societies, say two Brookhaven National Laboratory physicians, L. K. Dahl, M.D., and R. A. Love, M.D. It was pointed out that the study does not establish a definite cause-and-effect relationship, but suggests that high-intake of salt is one of several factors "necessary in appropriate combination" for the development of hypertension.

The eighteenth annual meeting of the New Orleans Graduate Medical Assembly will be held March 7-10, 1955, with headquarters at the Municipal Auditorium. Following the New Orleans meeting, there will be a post-clinical tour to Europe, with sightseeing trips and medical programs in Paris, Rome, Florence, Venice, Munich, Copenhagen, Stockholm and London, via air both ways, or an air-sea combination.

Office Proctology *

MARVIN A. LUCAS, M.D.

and

JAMES E. RYAN, M.D.

Louisville

Among the hundreds of aches, pains, diseases and abnormalities which meet the busy doctor in his daily practice of medicine, one frequently recurring group is the problems causing rectal symptoms.

Many times they can be and are resolved in a few minutes by the kindly attitude and practical training of the family physician. Too much cannot be said in regard to the very real advantage of the family doctor, who maintains an understanding attitude. When your patient presents himself with a rectal complaint he really feels that he does genuinely have something wrong with himself. All of our social training, from childhood on up, tends to cause us to repress any expression in regard to the necessary function of the rectum. It is embarrassing to the patient to talk about it. It is more embarrassing to submit to examination. The doctor who listens sympathetically, perhaps helping guide the patient in expressing himself, establishes a definite bond of understanding with that patient. If the doctor can give that patient relief from his trouble or guide him in its investigation, he is always more than grateful.

It is principally because of this patient response to sympathetic treatment in this situation that so many advertising clinics, and so many irregular and spurious healers, have developed tremendous followings. As a matter of record it is doubted that regular doctors see more than one-half of the rectal troubles of their patients. In fact, all too often, "George" hears that "Joe" had some trouble so he asks "Joe" about it. "Joe" may give any one of a hundred answers. We would like for "Joe" to say, "George, I saw my family doctor. He sure was wonderful about it."

Method of Examination

First, a few words about examination. The ordinary examining table is very adequate. We believe that you will like the simple device of having the patient lie flat on his stomach (prone), and place a blanket roll beneath his hips to elevate the buttocks. Separation of the buttocks then allows for good lighting without distortion and minimal pulling. A good light, a spot light or one of the spot type electric light bulbs is a great help. Finger cots or gloves, lubricating jelly, and a gentle touch complete the most basic needs. A good anoscope is necessary for visualization of the inner part of the anal canal and the internal hemorrhoidal area. A six inch electrically lighted proctoscope will visualize all of the rectum proper. A ten inch (25 cm.) proctoscope will examine the lower sigmoid colon also. The use of these last two requires more time and also presupposes some practice in their use.

Symptomatology

There are definite symptoms which draw the patient's attention to the rectum. They are: Pain, Bleeding, Protrusion, Itching, and Diarrhea or Constipation. These require examination and diagnosis. Much is readily done in the office. Some require further investigation. Some of the troubles can receive quick immediate relief; others are not so easy.

Pain in the rectum, if sharp, means the lesion is very low, because ordinary sharp pain sensation does not extend farther inside than the pectinate line, about 3 cms. inside. Dull or pressure pain usually is from higher up, but usually not above 6 to 8 cms. inside. These cases are often complicated by aches in the back, the hips, and sometimes down the legs. These patients, if men, require prostatic and bladder check and, if women, need pelvis and bladder examination. The commonest lesions causing sharp or severe pain are: thrombosis, fissure and abscess.

Bleeding, if bright red and liquid and not in massive amount, means that it comes from very near the end of the bowel. Clots and dark blood often mixed with mucus and feces are seen in ulcerative colitis, polyps, and cancer. Massive hemorrhage is most often from bleeding peptic ulcer, but is also seen in bleeding from a torn polyp, from bleeding Meckel's diverticulum, and sometimes from ordinary colon diverticulum.

*Read before the Kentucky Chapter of the American Academy of General Practice, September 22, 1954, during the Annual Meeting of the Kentucky State Medical Association, Louisville.

Protrusion most commonly is from prolapsed hemorrhoids, prolapsed hypertrophied anal papilla or an external thrombus. True complete prolapse of the rectum is not very common. Condylomata acuminata (venereal warts) are fairly frequent in occurrence.

Itching is purely a symptom and is not a definite disease, not a pathologic entity. We will speak of it in more detail later.

Diarrhea occurs so frequently that almost every doctor has a favorite diarrhea mixture. The great majority of diarrheas are due to dietary indiscretion or to salmonella enteritis. These respond well to the time honored paregoric and bismuth mixtures. Now most doctors also add sulfasuxidine or sulfathalidine. It is not these, but it is the group of chronic diarrheas which are problems. These require multiple procedures including proctoscopy, stool examinations, cultures and barium enemas to find the cause and to rule out serious disease such as cancer, ulcerative colitis and amebiasis. One diarrhea to be on the alert for is that following taking of the new anti-biotics.

Constipation, if life-long, and not getting much, if any worse, usually indicates poor dietary habits, inadequate water intake and ignoring of the normal urge.

A change in bowel habit either toward constipation or toward diarrhea causes suspicion of possible new growths and indicates the use of all of the methods of investigation; proctoscopy, barium enema x-ray study, and upper gastrointestinal x-ray study in that order.

Office Cases

There are about a half dozen anorectal conditions which are easily diagnosed and frequently treated as ambulant or office cases. A brief discussion of each of these follows.

External Thrombus. The history is that of sudden onset with swelling and much pain. The patient usually sees you on the second or third day. If he waits until the fourth or fifth day, he will probably come in only if it is very large or because the overlying skin has become necrotic and discharge and bleeding has begun. Diagnosis is quickly evident in the swollen bluish perianal skin and the palpable clot beneath. Therapy is immediate, under local anesthesia. Let us recommend that the old procedure of a slit into the crown of the thrombus, and evacuation of the clot be abandoned. Too often, the slit quickly agglutinates and the thrombus reforms overnight, thus disappointing both the doctor and the patient. It is much better to take a sharp scissors and excise the entire swollen area. The wound may look a little large at the moment, but next morning you will be amazed at how small it is. Frequently, in excision of the thrombus one will encounter a subcutaneous vessel which bleeds freely. This is best handled with a plain zero catgut tie. After checking for any free bleeding, a pressure cotton dressing, held with a T-binder (improvise from an ordinary 3-inch roller gauze bandage) completes the job. We usually keep the patient in a little recovery room for several minutes, then recheck for possible bleeding. The patient will need a few Empirin tablets to take just before and after the local anesthesia disappears. He should go home, lie down, and not try to go back to work that day. Next day, it is well to see him after his bowels have acted; also again three days later. After that he usually is feeling well.

Anal fissure (split or tear) is most often presented to the doctor as a condition of acute severe pain with bowel action, and continuing as a burning or aching, or both, for some time afterward. Usually there is a history of recurring constipation and streaking of blood on the well-formed or hard bowel movements. The fresh or recent fissure on examination shows a raw, red split either at or just inside the anal verge. It can be seen by separating the buttocks. A little pressure may be needed to expose the anal aperture because of the subconscious tightening of the muscles by the patient as a protective effort. The fresh fissure lends itself well to office treatment. About 50% can be cured in this manner. However, be careful to know yourself and let it be understood by your patient that if he neglects regular bowel habit and care there is no reason why he cannot tear himself again. As a matter of fact, once he has had a fissure he will be prone to have another.

If the fissure shows only a very small external "sentinel" tag at its external end, and has not yet developed an hypertrophied anal papilla at its inner end, and the patient is not too "jumpy", then it is an excellent subject for office treatment. There are two principal means of treatment which we are using at the present.

Fissures which are simple splits in the skin will usually heal with careful attention to cleanliness. Have the patient wash the area after each bowel action and apply a cortisone ointment, such as Neo-Cortef,

afterward.

Those fissures which show a very small external, edematous skin tag, but are not undermined or fibrotic, respond well to the careful injection of Nupercaine in oil (Ciba) beneath the fissure bed, followed with the above measures.

Fissures which are undermined, fibrotic and have an internal hypertrophied anal papilla usually come to surgery. Surgery can be done under local anesthesia but we believe that if it is bad enough to require outright excision, then both the patient and the doctor are happier if it is done in the hospital.

Abscess usually has a history of from two to three or four days of gradually increasing, unremitting pain by the time the patient comes in to see his doctor. He will usually have tried several home remedies without success.

Incision and drainage of many of the abscesses is done in the office. It is usually done under local procaine infiltration anesthesia. A good rule for picking the case for office drainage is to do those which present themselves clearly, and are not difficult to get exposed. Some abscesses, such as the intersphincteric and the pelvi-rectal, lie so deep that it is best to use the better anesthesia obtainable in the hospital. When undertaking to incise and drain the abscess in the office be certain to tell the patient that this drainage will relieve his pain and pressure, but it does not cure the fistula which is the underlying cause of his trouble.

The best spot to incise the abscess is just as close as possible to the anal outlet and still hit the pus. Make a small, cruciate incision, then, with scissors, cut away each corner leaving a circular hole. This permits maximum drainage with least danger of agglutination of the wound edges. Making the incision as near the anus as possible makes the fistulous tract as short as possible. A rather generous cotton dressing held in place with a T-binder made from a roller gauze bandage will hold the dressing in place. Have the patient stay in a recovery room for a few minutes, then recheck him for possible bleeding. He may need a few Empirin tablets to take after the local anesthesia has gone. Put him on hot Sitz baths for about a week. Inspect his wound twice during that period. At the end of the week it is best to remind him that his fistula will have to be repaired to prevent more abscesses in the future.

Fistulous tracts carry a history of previous abscess. Lack of this history leads one to look for acne-like hidradenitis or an abnormally placed pilonidal cyst. Usually a small flexible probe will enter the tract. Sometimes the tract can be probed the full length and will emerge in the rectum. Since the best way to excise a fistula is to come from the internal opening to the outside, the same way the pus went, we believe that generally it is best to do this in the hospital. Only a few of the purely subcutaneous fistulae are readily done as office procedures.

Condylomata Acuminata (venereal warts) are warty excrescences which grow well in moist places. They are easily recognized. If small and few in number, they can be removed in the office by fulguration. Some use phenol on a sharpened applicator stick, being careful not to touch any but the desired areas, and carefully drying away any excess. We have found it rather difficult to use successfully the podophyllin preparations. After removal of the warts it is essential to keep the area very dry, using some powder, such as boric acid powder or B.F.I. powder. Too many warts or a spreading of the warty process make the treatment a hospital procedure.

Hemorrhoids. The history of hemorrhoids is too well known to waste time in repetition. The hemorrhoids which permit office therapy fall into two main categories; those that are so small that correction of constipation and good bowel care cause the symptoms to disappear and those internal hemorrhoids which bleed but do not prolapse. There are other patients who have bleeding and prolapse, but who want only temporary relief from their bleeding until they can find a more propitious time for their needed surgery. It is not possible to cure prolapsing or mixed external-internal hemorrhoids by injection or by the more dangerous electro-coagulation therapy. However, given a case of bleeding internal hemorrhoids which do not prolapse, you can stop the bleeding by injection therapy. We recommend the use of 5% solution of quinine and urea hydrochloride as the safest (except in the case of those sensitive to quinine). Excellent results are also obtained with the use of 5% phenol in oil. For injection of internal hemorrhoids have a good anoscope and use a needle like that used for local anesthesia for tonsils. Insert the anoscope to above the pectinate line, visualize the internal hemorrhoid, swab it with an antiseptic solution, then inject the sclerosing solution at the inner

or superior pole of the hemorrhoid, using between ½ and 2 cc. of the sclerosing solution. Stop when the area begins to blanch or become white. Inject one hemorrhoid at a sitting. Usually there will be three or four hemorrhoids. Inject at approximately one week intervals. Be sure the injection is above the pectinate line into the mucosa covered internal hemorrhoid, otherwise there is severe pain. If this latter should occur then immediately inject two cc. procaine solution.

New Growths

Any bleeding, firm mass which feels at all suspicious of new growth deserves and must be biopsied. Biopsies need to be adequate but not massive enough to provoke much bleeding. Any patient with bleeding (unless we are certain that we see all of the cause) deserves careful proctoscopy. If that is negative, follow it by barium enema x-ray study. Even then do not let a negative barium enema x-ray study lull your suspicions to sleep. Many a new growth of the rectum proper is not seen by x-ray.

Pruritus

Last, but not least, is that "old debbil" pruritus—the itching one. Pruritus generally means there is moisture present, nothing more. We check for all the possible local causes of moisture; fissure, fistula, inflamed internal hemorrhoids and cryptitis. Then there are the more general causes such as diabetes mellitus, ulcerative colitis, parasites (pin worms), and the many contact allergies. As a purely empirical and practical method it is probably best to advise the patient, if you do not find a definite local cause, to keep the area very clean (washing instead of wiping) and dry by wearing a thin sliver of cotton between the buttocks. Occasionally, cortisone ointment may help. The anesthetic ointments are a snare and a delusion, and carry a definite danger of sensitization. If the simple measures do not work, then I would ask the help of other opinion, lest that case for you becomes like the albatross around the neck of the Ancient Mariner.

Summary

In this short presentation we have outlined simple office procedures which are used in proctology. In addition, six specific conditions which come under the head of office proctology have been outlined, with the measures taken for their treatment. We feel that the office practice of proctology is common to all doctors and not the special practice of any specialty group.

Rational Use of the Antibiotics *

J. PARK BIEHL, M.D.

Cincinnati, Ohio

The use of antibiotics probably concerns more physicians of various specialties and interests than does any other segment of medicine today. The field of antibiotic therapy has grown remarkably since its birth ten years ago. While a few years ago one could easily have covered the field as it concerned the practicing physician in a short talk, the time limitations of presentation require that we hit only certain high spots which are particularly deserving of emphasis. It is my purpose to speak on the general effects of the use of antibiotics, including toxicity, and a few specific points concerning the various preparations available.

*Presented at the Annual Meeting of the Seventh Councilor District, Kentucky State Medical Association, Frankfort, June 2, 1954.

From the Department of Internal Medicine, University of Cincinnati College of Medicine, and the Cincinnati General Hospital.

Bacterial Adaptation

I have spoken of the increasing magnitude of the field of antibiotics. If one looks, particularly in the living organism, for a reaction to every action, what has been the reaction of bacteria as a group to this devastating threat to their existence? We can clearly see at this time definite signs of adaptation on their part to the widespread use of antibiotics. Sensitive bacteria have shown a tendency to become weeded out by the selective effect of antibiotics, and resistant organisms are taking over in many areas. This phenomenon is more obvious in some parts of the country than others, but one can expect that it will become of increasing importance to the practicing physician in years to come. A specific example of this phenomenon is seen in the case of the staphylococcus. Ten years ago, when penicillin first came

into general use, staphylococci were almost uniformly sensitive to the killing effect of penicillin. Over the ensuing years it has been possible to demonstrate a progressive decrease in the percentage of strains sensitive to penicillin, so that at present less than 10% of staphylococci found in disease states are now affected at all by this drug. Similarly, aureomycin was initially almost uniformly effective against the staphylococci and the same phenomenon of decreasing sensitivity is seen in the case of this drug also. This shift to drug resistance has been the reason for the introduction of erythromycin into clinical practice. It, at present, is our answer to pathogenic staphylococci, but no doubt erythromycin in turn will also gradually lose its effectiveness against this organism. Many other types of pathogenic bacteria show the same pattern, although less spectacularly. Notable exceptions to this progressive development of resistance exist, which are of extreme importance clinically. The beta hemolytic streptococcus, the pneumococcus, the gonococcus and the spirochete of syphilis remain uniformly sensitive to penicillin. Consequently, penicillin is still the drug of choice in the treatment of infections due to these organisms, and no other antibiotic added to penicillin will enhance its effectiveness in such diseases. One exception to this statement is the case of gonococcal arthritis, which occasionally for unknown reasons fails to respond to low doses of penicillin.

Drug Allergy

Equally important to the reactions of the bacteria are the reactions of the patients to whom we have been giving these large quantities of the antibiotics. Side effects, particularly in the case of the tetracycline drugs, have occurred in as high as 11% of the patients, and frequently exceed by far the severity of the original illness for which the drugs were given. Allergy to antibiotics is seen particularly in the case of penicillin, and may be anticipated with any antibiotic drug. It is probable that allergy to the newer drugs will become more frequent with their continued use. At the present time penicillin is clearly the prime cause of drug allergy. Allergic manifestations range from simple rashes to fatal anaphylaxis. It is necessary for every physician to keep in mind that such fatal reactions may occur. They have been described in at least 20 patients in the medical literature, and it is impossible to guess how many such cases have occurred that have not been reported.

All that has been said to this point is of importance because of the fact that antibiotics are being used in an indiscriminate and irrational manner. This practice amounts to the use of a specific agent for non-specific purposes. There is nothing actually harmful or unethical about this so long as the physician does not delude himself into thinking he is actually providing specific treatment, and so long as the medication used is harmless. It is to be emphasized, however, that antibiotics are not harmless. If a patient demands injection of an antibiotic for the treatment of a common cold would it not be more in keeping with the sound practice of medicine to inject instead a harmless placebo?

The Choice of an Antibiotic

Given an infectious disease how does one decide which of the many antibiotics to employ? If one has a good idea of the responsible organism this problem is relatively easy, and is solved by our knowledge of the susceptibility of the organism to the available antibiotics. For example, it is known that some organisms are always sensitive to certain antibiotics, as is the case with the hemolytic streptococcus, pneumococcus, gonococcus and treponema. Other organisms, on the other hand, are known to be never sensitive to some or all antibiotics. There is a large in-between group in which the sensitivity is variable to the point where one must either await the results of sensitivity testing, or treat by playing the probabilities with a broad spectrum antibiotic. If the latter course is followed, it should be borne in mind that sensitivity data may be needed later if the treatment proves to be ineffective, so that it is necessary whenver possible to obtain cultures at the start.

What if one has no idea of the identity of the organism, in the face of a serious infection requiring immediate treatment? Our feeling on this problem is that one should use a treatment possessing a decisive bactericidal effect over as broad a range of organisms as possible. The best treatment possessing these effects is a combination of penicillin and streptomycin. Penicillin in this instance should be employed in large doses in the crystalline form, and streptomycin should be given at a rate of 2 grams daily. Again, one must keep in mind the importance of obtaining bacterial cultures before treatment from whatever source would seem likely to yield the organism.

It is clear from what has been said that the knowledge of what organisms cause what diseases is at present more important than ever before. We frequently base the choice of an antibiotic on this information, and more and more we are encountering unexpected types of bacteria as causes of otherwise commonplace infectious diseases. The staphylococcus is now a cause of hemorrhagic enteritis, similar to nothing ever seen before with the staphylococcus. Respiratory infections due to gram negative rods are becoming increasingly frequent, and acute pharyngitis due to the staphylococcus has been seen, to cite a few examples.

Dosage of Antibiotics

It is not likely that increasing the dosage of penicillin beyond conventional levels will increase the likelihood of sensitization. Consequently the use of an excess of penicillin may be justified as a safe way of obtaining cheap insurance in many cases. A scientific basis for such a practice is seen from more than one source. Certain diseases characterized by thick avascular exudate barriers may at times only be sterilized by the use of excessive concentrations of penicillin in the surrounding fluids. It has thus been shown that pneumococcal meningitis responds in a superior manner to the use of 12,000,000 units of penicillin a day in contrast to the previous regimens involving only a few million units a day (1). Treatment of subacute bacterial endocarditis may be successfully carried out in a two week period if high doses of penicillin are given, possibly with overall results that are superior to those with the use of conventional doses (2). It should be borne in mind whenever high doses of penicillin are employed that approximately 10% by weight of the potassium penicillin molecule consists of potassium. The intramuscular injection of large amounts of potassium penicillin will introduce into the tissues sufficient potassium to cause local tissue reactions with sterile abscess at times. With high dose penicillin therapy therefore, it is best to employ sodium penicillin.

It is similarly possible that the use of higher doses of tetracycline, made possible by its reduced toxicity as compared to chlortetracycline (Aureomycin), and oxytetracycline (Terramycin), will allow even greater effectiveness of the drugs in clearing up bacteria of borderline sensitivity. Where it was frequently difficult to employ more than 2 grams daily of either of the older drugs, tetracycline may now at times be given in 2 to 3 times this dose with no side effects.

Duration of Antibiotic Therapy

A question frequently asked is "How long should one continue the use of an antibiotic in a given patient?" This is a question that is difficult to answer, but one may say that in general, treatment is necessary well beyond the point where clinical evidence of disease has disappeared. As a guide one may cite the work of the investigators at the Warren Air Force Base in Cheyenne. They found that single shot therapy, using the more common preparations of penicillin, was virtually ineffective in eradicating streptococcal pharyngitis infections. From the results of their studies it is seen that it is best to continue treatment for at least one week. The most convenient preparation for this purpose is procaine penicillin with aluminum monostearate, the so-called "72-hour penicillin", given every 3 days for 3 doses.

Comments on the Newer Preparations and Drugs

Penicillin: Penicillin is still our most valuable drug by a fairly wide margin. It is one of the few bactericidal drugs available, and in spite of the allergic sensitization that is now seen to penicillin, it is still also the least toxic. Many new dosage forms have appeared which require evaluation. Oral penicillin remains generally disappointing, having no real advantage over more effective oral antibiotics, in particular the tetracycline drugs. Its effects in eradicating more serious disease are inconstant compared to results with the intramuscular use of the drug. Absorption from the gastrointestinal tract remains irregular, whatever the form used. A truly unbelievable new form of penicillin has made its appearance in the compound Bicillin. This insoluble form of penicillin has the property of slowly releasing penicillin into the blood stream so that one can expect low but still therapeutically significant levels for a period of one month. The significance of such a drug in prophylaxis is indeed great. In addition, it has been found that milder forms of lobar pneumonia are easily treated with one shot of Bicillin (3). Neo-Penil has not been impressive, in our hands, insofar as any unique qualities are concerned.

The tetracyclines: The anticipated kinship between Aureomycin and Terramycin has been demonstrated by the discov-

ery of the chemical formula of each. A new compound has been formed from Aureomycin, embodying chemical properties of both Aureomycin and Terramycin, which seems clearly superior from a clinical point of view to either of its parent drugs. This compound, tetracycline, marketed as Achromycin or Tetracyn, has little of the toxicity for which the parent drugs were notorious, possessing at the same time the same broad spectrum features of these earlier drugs.

Streptomycin: Streptomycin at present is a highly effective drug in tuberculosis, but outside of this category much of the previous value of streptomycin has been usurped by the newer drugs. It is, however, highly desirable in combination with penicillin under circumstances mentioned above.

Chloromycetin: The unfortunate bone marrow toxicity of chloromycetin has severely impaired its clinical desirability. At present it is the general feeling that chloromycetin should be reserved for specific bacterial diseases wherein it is needed. Typhoid fever is a definite indication for chloromycetin, since no other antibiotic approaches the effectiveness of this drug in this disease. Other instances in which sensitivity testing indicates that chloromycetin is the only useful drug for the situation also clearly justify its use.

Erythromycin: As mentioned previously, this drug is the answer at present to the problem of staphylococcal resistance. It is generally similar to penicillin in its spectrum, but has no advantage over penicillin otherwise.

Polymyxin, Bacitracin and Neomycin: These drugs are designed for special occasions, being slightly toxic when applied systemically. It is likely however that such toxicity is reversible in nearly all cases. Polymyxin is apparently uniformly effective against Pseudomonas aeruginosa, and is the only drug generally useful in diseases due to this organism. Ointments made up of these antibiotics are popular in dermatological practice, but have their limitations in the results obtained.

Combinations of Antibiotics

Multiple antibiotic therapy is a commonplace thing today. More than one antibiotic may be used because of the anticipation of true synergism upon the offending bacteria, because of a desire for added insurance against therapeutic failure, or simply because of ignorance. It is possible at times to obtain superior results with a combination of antibiotics yet it must be kept in mind that occasionally one antibiotic may antagonize the effects of another. The latter phenomenon is admittedly not a commonplace thing in clinical practice, yet it is a potential source of failure. Synergism ordinarily takes place within a limited group of antibiotics. Penicillin, streptomycin, and bacitracin may show synergism, one with another, but the tetracycline drugs never do with one another. Synergism of a member of one of the above groups with a member of the other group is inconstant and not to be expected[1]. It is possible that on an empiric basis one might advise the use of an excess of penicillin whenever another drug is to be added to it. In this way one might have some insurance that the effectiveness of penicillin would not be interfered with by the second drug.

Prophylaxis

The prophylaxis of streptococcal sore throats in children susceptible to rheumatic fever is a promising application of antibiotic drugs. It is well recognized that prevention of subsequent streptococcal sore throats will prevent further rheumatic activity in the child who has had rheumatic fever, and that the best way to assure this is through the continuous use of a chemotherapeutic drug. Sulfonamide drugs have in the past not provided uniform prophylaxis, and have the disadvantage that the physician must depend on the patient to take the drug regularly. The latter objection also holds for oral penicillin. A single shot of an antibiotic lasting for a period of one month is the ideal for the prophylaxis of rheumatic fever, and Bicillin is currently being used for this purpose. It is considered desirable to provide antibiotic cover at least during the months during which streptococcal pharyngitis is likely to occur. Many prefer to give it all year round. What happens if the child becomes sensitive to penicillin? Certainly Bicillin could not be expected not to produce a reaction in the penicillin sensitive child. Allergy to Bicillin, however, apparently must be rare. How an allergy would behave in continued concentrations of the drug is a serious question. Enough Bicillin has been used for this purpose, however, that allergy is not the problem one might anticipate it to be.

Conclusion

The introduction of antibiotics has allowed the physician to relax in many

therapeutic situations which previously would have called for his utmost skill. They in turn however have required the refocusing of our attention on newer problems. Many have arisen from the indiscriminate use of these drugs. Through the rational use of the antibiotics the physician may broaden his scope; through their indiscriminate use a narrowing of thought and abilities will result.

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Pregnancy in Addison's Disease

JAMES ROBERT HENDON, M.D.

and

ROGER A. MELICK, M.B. (Syd.) M.R.C.P.

Louisville

Classical adrenocortical hypofunction, or Addison's Disease, is an uncommon entity which once was uniformly fatal. Through improved knowledge of the metabolic derangements characterizing the disorder, and through the exhibition of such compounds as Desoxycorticosterone acetate (DOCA) and 17 hydroxy—11—dehydrocorticosterone (cortisone), the survival time of Addisonian patients has been greatly extended.

Hypo-adreno-corticism is in no wise incompatible with fertility. However, reports of pregnancies among Addisonian patients are few. To our knowledge approximately sixty such cases are on record[1-7]. Of these, fourteen pregnancies have occurred in the part five years when potent adrenocortical hormones have been available[4-7]. Among these fourteen pregnancies, there has been one maternal death.

The maternal death rate among such patients previous to 1949 was approximately 35%.[1] There is little doubt that such procedures as therapeutic abortion and Cesarean section constituted stressful situations which increased the mortality rate. Yet these measures in less enlightened days seemed expedient.

Two danger periods exist for the pregnant Addisonian: the first trimester, with its concomitant nausea and vomiting may lead to collapse of electrolyte balance and result in fatal Addisonian crisis. The stress of labor and delivery with blood loss may also precipitate irreversible shock. Between these two periods the welfare of the mother may be surprisingly good; in fact, the therapeutic regimen so far as hypocorticism is concerned may be modified. Elevation of the seventeen-ketosteroid excretion rate has been reported. The true significance of this is in doubt, as Pincus[9] has shown that this may be due actually to a rise in 20-ketosteroid excretion, the 17- and 20-ketosteroids not being differentiated in the Zimmerman reaction.

Jailer and Knowlton[8] reported a rise in excretion of ketosteroids and neutral reducing lipids during the pregnancy of a patient with Addison's disease. A return to pre-gravid low levels was seen in the two weeks following delivery. Jailer and Knowlton stated that an extract of the placenta exhibited corticoid activity. Moreover, the ketosteroid excretion of the child was not increased. For these reasons they felt that the placenta was the source of substances favorably affecting the mother, rather than the fetal adrenal glands.

The offspring of Addisonian patients are apparently unaffected by the maternal disorder. Breast feeding is usually forbidden, as it seems to act as an added strain on the metabolic deficiency of the mother, and the term "lactation crisis" has been used.

We have recently followed one of our Addisonian patients through a successful pregnancy and feel that her case merits report:

Case Report

At the time of onset of pregnancy, D. M. was a nineteen-year-old white married

From the Section of Endocrinology, Department of Medicine, University of Louisville School of Medicine.

female with classical characteristics of Addison's disease. She had been treated for tuberculosis of the hip in early childhood and for adrenal cortical hypofunction in the Louisville General Hospital wards and clinics for four years.

Several programs of therapy had been given trials at different times during these years. At one time a fresh surgically removed adrenal gland had been transplanted into the substance of the rectus muscle. Although most of this transplant appeared to have been lost through sloughing of the operative site, a biopsy of the area one month later was said to reveal functioning adrenal tissue. For a time thereafter she was maintained in a satisfactory state by the mere addition of salt to her diet. Four months after transplantation, however, it was found necessary to add DOCA and later cortisone to her program. At the time of onset of pregnancy she used from 25 to 37.5 mgm. cortisone daily orally and 4 mgm. DOCA daily sublingually.

Signs of early pregnancy occurred three months after her marriage, and pregnancy was diagnosed as a certainty three weeks later. She was admitted to the hospital for evaluation. On admission, values for serum sodium were 143 m.Eq./L, for serum potassium, 4.65 m.Eq./L, for blood sugar (fasting) 79 mgm.%; 17-ketosteroid excretion determination could not be done. Physical and other laboratory examinations revealed no change other than the normal concomitants of pregnancy. She was advised to take 37.5 mgm. of cortisone orally daily, to continue her usual sublingual administration of DOCA; and she was discharged to out-patient care in the Endocrine and Pre-Natal Clinics.

During the first trimester there was only mild complaint of nausea, and her condition clinically remained excellent. Seventeen-ketosteroid excretion values after the first trimester are shown in Table I.

Blood chemistry values were normal until determinations made in the seventh month of pregnancy showed the following values: Serum sodium, 118.7 m.Eq./L; serum potassium 3.35 m.Eq./L; serum calcium 4.75 m.Eq./L; serum chloride 88 m.-Eq./L; blood sugar (true) 53 mgm./100 cc; hemoglobin 10.1 grams. Fifteen grams of salt daily were added to her schedule. She rapidly became edematous; blood pressure was 118/74. Salt, other than that normally used on food, was discontinued after one week.

Table 1

Date	17 K. S. excretion mgm/24 hours	Pregnandiol excretion mgm/24 hours
6-29-53	9.07	8.40
7-10-53	11.54	18.90
7-24-53	12.00	22.48
7-31-53	14.30	20.88
8-16-53	14.24	15.80
8-31-53	22.10	23.50
9-11-53	18.92	27.90
10- 1-53	6.60	
12-14-53	11.00	41.00
*12-16-53	12.00	12.00
12-17-53	6.00	5.00
12-18-53	6.00	
12-30-53	5.00	
1- 5-54	5.00	
1-15-54	3.50	
1-26-54	4.50	
2- 2-54	6.00	

*Onset of labor

During the progress of pregnancy there was remarkable recession of pigmentation. There was general lightening of the skin of the whole body, which had been quite bronze; moreover, lingual and buccal surfaces completely lost their areas of bluish-grey color. The mammary areolae and the vulva retained their very dark appearance.

Strong labor had its onset at term; the patient entered the hospital at 6:00 p.m. At 9:00 p.m. 50 mgm. cortisone acetate was given intramuscularly. At 12:45 a.m. 1,000 cc 5% dextrose in normal saline was administered intravenously. At 4:15 a.m. 50 mgm. cortisone acetate and 2.5 mgm. DOCA were given intramuscularly, and 1,000 cc normal saline was begun intravenously. Saddle block anesthesia and self-administered Trilene inhalations were used. At 4:38 a.m. the patient was delivered with the help of low forceps of a viable female infant weighing 8½ pounds. There were no unusual circumstances of the labor or delivery, and blood pressure remained at normal level.

In the first twenty hours following delivery a total of 100 mgm. cortisone acetate was given intramuscularly in divided doses. On each of the following two days, she received 75 mgm. cortisone acetate orally in divided doses. Thereafter, she returned to her pre-partum dosage of cortisone acetate and DOCA.

Lactation was normal; but, due largely to strenuous maternal objections, attempts

at breast feeding were abandoned. One twenty-four hour urine specimen was obtained from the infant by in-dwelling catheter before mother and child left the hospital against medical advice one week after delivery. The value for this specimen was reported as 0.7 mgm. The condition of the two patients has been quite uneventful since that time.

Discussion

The main points of interest in this case are the lack of complications, the ease of management of pregnancy in a patient with Addison's disease, the gradual fading of pigmentation with complete loss of abnormal buccal pigment. Pregnancy was quite uneventful, apart from a few early symptoms of nausea and weakness, which were easily controlled. The stress of delivery produced no complications in the presence of administered cortisone.

The urinary excretion of 17-ketosteroids by the method used showed a rise, which has been mentioned, and was thought to be due at least in part, if not altogether, to the 20-ketosteroids. The low values in October and November are difficult to explain; they were done in a different laboratory, and this may be an explanation. The one specimen obtained from the baby shows a value which is in keeping with that reported by Jailer and Knowlton.[8] Seventeen-ketosteroid values postpartum are high for Addison's disease and probably are due to administered cortisone.[10] The pregnandiol excretion estimations are normal.

Recent reports of pregnancy in Addison's disease[7] give about 200 mgm. cortisone per twenty-four hours as the optimal dosage during labor and immediately postpartum. Cases maintained on cortisone seemed to pursue a smooth course, though it is too early to be certain. If this continues to be the case, the attitude toward pregnancy and breast feeding in these patients will probably have to be re-examined.

Summary

1. Pregnancy in a case of Addison's disease is described.

2. Pigmentation decreased during pregnancy, but hormone requirements were unchanged.

3. The labor was rapid and uneventful; a normal, viable infant was delivered.

4. Adequate breast milk was produced.

5. The management of pregnancy in a patient with Addison's Disease should not be looked upon as a grave and formidable problem.

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Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

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CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

Chondrosarcoma of Femur: Secondary Type Following a Benign Osteochondroma of the Femur

W.M.H., a 45 year old white male was admitted September 6, 1954, with complaints of pain and weakness in the left knee and thigh to such an extent that he was unable to work. His symptoms had been present for approximately a year, when he began to have weakness in the left knee region, and at times a numb, tired feeling in the left thigh, especially after a day's work.

Past History

This patient was first treated at the hospital in April of 1950 for bronchial pneumonia. In April, 1951, he was treated for a peptic ulcer. In November of 1953 he sustained an injury to the left knee while at work, which resulted in an internal derangement of the left knee joint, and a torn cartilage. At that time the examining physician secured x-ray films of his knee and discovered a tumor involving the left femur above the joint. The patient was informed of the presence of this tumor. He was advised of its possible serious nature and operative removal of the tumor was recommended because it might undergo malignant changes. Due to continued disability in the knee an internal semi-lunar cartilage was removed in December of 1953 and he returned to his occupation as a laborer in March of 1954.

Physical Examination

The general physical examination was not significant except for the part relating to the left knee and lower thigh region. There was a healed oblique reddened scar over the medial aspect of the knee joint but there was a complete range of motion. Over the posterior aspect of the lower portion of the thigh and the popliteal area there was a palpable, firm, and not especially tender, tumor mass. There was no soft tissue swelling in this area. Questionable loss of sensation over the left great toe and the dorsum of the foot was noted, but there were no other sensory disturbances, and the reflexes were apparently normal. The strength of the muscles of the foot, leg and thigh was within normal limits. The patient walked without a limp.

X-Ray Examination

X-ray examination of the distal two-thirds of the left femur revealed a tumor outgrowth from the posterior aspect and distal third of the femur, which appeared to be covered by periosteum, the periphery of which was less dense than the adjacent bone. There was an area of lessened density at the lower projection of the tumor mass in the popliteal area, which would make one suspicious of a degenerative malignant process. The impression at that time was osteochondroma of the distal third of the left femur, with possible malignant changes. A postero-anterior view of the chest did not reveal any significant pulmonary or cardiac abnormality. A skeletal survey did not demonstrate any osseous lesions similar to the one seen in the femur.

Laboratory Studies

There were no significant laboratory findings.

Course in Hospital

The patient was presented at the weekly tumor conference, and it was concluded that there was a possibility of malignant changes occurring in what previously had been a benign osteochondroma. A biopsy was advised and was done on September 8, 1954, under a general anesthetic, a generous piece of the tumor being resected. The tumor was found to be a chondrosarcoma.

On September 15, 1954, a left hip disarticulation was done. The post-operative course in the hospital was uneventful and he was discharged on September 30, 1954. The patient's clinical course since being discharged from the hospital has been un-

eventful. He has been fitted with a lower extremity prosthesis and is learning how to walk with it.

The final surgical specimen report on September 25, 1954 revealed the patient had a chonrosarcoma arising in an osteochondroma.

Discussion

by: K. Armand Fischer, M.D.

Section of Orthopedic Surgery

This patient illustrates well the almost tragic results of procrastination by one who has been informed of the presence of a dangerous bone tumor, one which could readily have been removed surgically almost a year previously with an excellent result and without loss of his limb. Secondary chondrosarcomas are nearly always seen in adults and result from malignant changes in the cells of an osteochondroma, a central chondroma or multiple exostoses. It is a well known fact that osteochondromata occur in a number of locations on the scapulae, ribs, knees and pelvis. Wherever they are subjected to trauma, there is a possibility that malignant changes may occur. These tumor masses if subjected to trauma should be removed or x-rayed frequently to determine if there are any suspicious changes going on in the structure of the tumor. The x-ray films in secondary chondrosarcomata usually show soft areas of decreased density around the edges of the tumor mass, these findings being typical. One should always be on the lookout for such changes, especially around the knee joint, the trochanteric region of the femur, and in the humerus.

Figure 1. This illustration of the x-ray findings in the left femur reveals an osteochondromatous outgrowth from the posterior aspect and distal third of the femur which appears to be covered by periosteum; the periphery of which is less dense than the adjacent bone. There is an area of lessened density at the lower projection of the tumor mass in the popliteal region, which is suspicious of a degenerative malignant change.

In the text "Tumors of Bone" by Charles F. Geschieter, M.D., and Murray M. Copeland, M. D., published in 1936 by the American Journal of Cancer, on page 31 is found this statement: "If this cartilaginous mass is small or if it is definitely or faintly outlined with calcified material, there need be no hesitancy in making the diagnosis of a benign lesion. When, however, the cartilaginous mass is large and ill-defined on its outward margin and when, its calcified areas are being resorbed and present a granular appearance and when, in addition, these more translucent zones are secondarily invading the bony base or pedicle, malignancy is to be suspected."

On page fifty-three they continue as follows: "While many exostoses do not require operation and cures are commonly effected in those with aggravated symptoms by simple surgical removal, there is a third group in which both the prognosis and the treatment are an entirely different problem. This is the group of benign osteochondromas which undergo secondary malignant change. In the present series of cases, malignancy arose in over 7 per cent of these benign exostoses or osteochondromas. This is a far higher percentage than is generally conceded, but the reason for this increase in the percentage of malignancy in the present series is due to the care with which they were studied."

In conclusion, on page fifty-six, they say: "Cases of single exostoses without symptoms may be left untreated but should be watched by repeated x-ray examination, since they may undergo secondary malignant change particularly af-

ter the age of 30. Simple excision usually suffices to cure those osteochondromas producing pain or dysfunction."

In most cases of secondary chondrosarcoma treated by early resection or amputation there is a better prognosis than in most other osteogenic bone tumors. The prognosis for life in the case under discussion is thought to be good, but it is to be regretted that the patient did not follow the advice of his physician in November of 1953, at which time the probabilities are that the tumor could have been resected *en masse* without the loss of his femur.

SPECIAL ARTICLES

"THE COUNTY SOCIETY PRESENTS THE MEDICAL FORUM"*

ARTHUR P. TIERNAN

Evansville, Indiana

Most medical societies in America are small and cannot afford an executive secretary. As a result they have not had someone to help them plan, to do the detail work and help develop some of the projects that have proved successful in the field of medical public relations. I wish to describe a project that you can do by yourselves, regardless of your size. An executive secretary is not needed for this job. It is the public medical forum.

A. P. Tiernan

Medicine has groped around for some time, seeking the right public relations techniques. Through trial and error we have found some things that are proving their effectiveness. The free public medical forum, in my opinion, is the best answer to date.

The whole order of the practice of medicine is in a state of great change. There is an ever increasing public demand for more and more information about medicine and health. Presented in the public interest, the forum renders an invaluable public service. Through the forum, the physician, for the first time, is assuming his responsibility to provide the public with authentic, accurate medical and health information. For the first time, the general public is getting this information from the men who know most about it—their own doctors—instead of reading in magazines, and other publications, material written by authors far removed.

The Vandenburgh County Medical Society did not originate the idea of the forum. Credit for this goes to the Pinellas County Medical Society in St. Petersburg, Florida. About the time we heard of it, the editor of the Evansville Press, our afternoon newspaper, read of the Pinellas County forums in the trade publication of the newspaper business, "Editor and Publisher." He saw tremendous promotional possibilities in the forums and contacted me at my office. We are fortunate in having fine relationships with both of our newspapers. We got together in a meeting, and our public relations committee and the editor agreed upon a plan. The Society membership approved, and we were ready to go.

And so, the stage was set for a public relations venture which was to prove successful beyond the most imaginative dreams of its planners. The venture was successful for a number of reasons, most important of which were:

1. The great public demand for information about medicine and health.

2. The fact that it was being given to the public by their own doctors, instead of lay writers in various publications.

*From a presentation by Arthur P. Tiernan, Executive Secretary of the Vanderburgh County (Indiana) Medical Society before the County Society Officers' Conference at Lexington, Kentucky, April 15, 1954.

3. There was tremendous enthusiasm in our Society for the project. Those who participated took the job seriously and gave it their best effort.

4. The public saw the physician in an entirely new light. They saw him as a highly educated man, somewhat of a teacher, and a citizen interested enough in his community and its welfare to give more of his time to the subject of health—a subject of which he alone could speak with more authority than anyone else.

5. The newspaper and members of its staff were just as enthusiastic as our doctors, and just as eager for the forums to succeed. They considered it the best promotional project they had ever engaged in. It was a public relations enterprise for the newspaper as well as the medical society. Newspapers, too, like to be thought of as being intensely interested in the community and its well-being.

6. The forums gave the public an authentic picture of modern medicine, the art as well as the science. It was an opportunity for the physician to explain the problems of diagnoses, and help people understand why the doctor can't press a button, get an instant, correct diagnosis and prescribe an infallible treatment, all in the space of a brief office visit.

7. It gave the physicians opportunity to debunk much of the stuff that has appeared in lay journals about medicine.

8. It provided the time and place for our men to show that most medical progress comes when doctors sometimes disagree; that doctors are not content to keep on doing the same old thing that everyone else does; that there is a constant searching for newer and better ways to save human life, relieve suffering, and cure disease.

What is the medical forum? Briefly, it is a joint project of the medical society and a newspaper conducted by a panel of physicians, who answer questions on medical subjects submitted by readers of the newspaper, in a public meeting for which there is no admission charge.

Through a poll conducted by the newspaper, the readers vote for the subjects they wish to hear discussed by the panels. In our case, we decided to hold a series of eight forums. We gave the newspaper a list of about 20 subjects to print as suggestions to the readers. Subjects were not limited to this list, and readers could vote for anything they wished to hear discussed.

The eight subjects were selected on the basis of votes. Our subject titles and the order of their popularity with the readers were as follows:

1. Cancer
2. Heart Disease and Blood Pressure
3. How to Grow Old and Like It
4. Arthritis and Rheumatism
5. Sinus Disease and Tonsils
6. Mental Illness
7. Overweight and Health
8. Ulcers and Indigestion

The newspaper conducts the poll and tabulates the votes. The newspaper announces the results and the dates for each program. This is followed by a coupon printed in the newspaper during the week before the date of each program which is used by the readers to write specific questions they want answered on the subject coming up for discussion.

We held our forums on Sunday evenings. The question coupons in the newspaper did not appear after the Thursday preceding forum night. On that Thursday night the panel members held a meeting in the office or home of the chairman. On the night of the forum the chairman for each particular panel also served as the speaker of the evening, who would open the meeting, after introductions by the moderator, with a 10 to 15 minute general discussion of the subject. The moderator in our case was the newspaper editor. In some places a physician has been used as moderator to direct the questions to the panel members—it is simply a matter of personal choice.

At the Thursday night meeting the questions were assigned to the panel members so they would have ample time to prepare their answers. All panel members were asked to bring along several questions of their own in order to be sure of having enough to round out the discussion.

Everything concerning the panel presentation was planned thoroughly in advance, and yet the panel had the effect of being spontaneous and unrehearsed. None of our panel members were permitted to use notes. As a matter of fact there was not a single scrap of paper on the table before them all during the series. We permitted no questions or comment from the floor. Our men confined their remarks solely to medical subjects. They avoided any mention of government control, fees, and such. We did not want to be accused of using the forums just as a gimmick to get out a crowd of people so we could sell a bill of goods. We think we did a much more effective job against government control by pointing out our efforts towards

building confidence, respect, and better understanding for the medical profession.

The people of Evansville demonstrated their appreciation of the forums by turning out in large numbers for the entire series. We had an average attendance of more than 1,000, and we received much constructive and friendly criticism on ways of improving the forums. The response to the question blanks was good. We answered an average of about forty questions a night. Our programs started promptly at 8:00 o'clock and closed on the dot at 9:30.

Our success has led to the endorsement of this type of program by the Indiana State Medical Association, and an effort is now under way in Indiana to encourage every county society to go into them in the interest of good public relations. Just as in Kentucky, Indiana does not have many counties with executive secretaries.

The Woman's Auxiliary was asked to help in setting up these programs. You will be missing a bet if you, too, don't ask them to help.

You would like to know, of course, how we selected the men to participate in the forums. Our public relations committee decided to ask for volunteers through a questionnaire. Our series started early in October last year. Four months in advance—along in May—we sent out call for volunteers. We had more volunteers than we could use, and instead of having six men to each panel, in addition to the speaker of the evening, we used nine men and a speaker. The matter of panel size is one of expediency or choice. A program could be run with four men on the panel, a moderator and speaker, if this was preferred. If you were really short-handed, you could manage with two panelists and let the speaker of the evening also serve as moderator. As I have said, the forum allows for a lot of flexibility and can be used in the smallest or the largest county medical society.

After our subjects and dates had been decided upon, we assigned the volunteers to the panels. In our community, in which there are a lot of specialists, we balanced our panels with both specialists and general practitioners.

In our preliminary meeting with the newspaper editor, certain agreements were reached. The newspaper agreed to pay the entire cost of the series, provide all physical equipment, arrange for the meeting place, and publicize it widely. This included rental fees for the high school auditorium where the series was held, janitor services, public address system, etc. The newspaper also agreed to accept our judgement in all publicity matters. We found it wise, for instance, to have our members referred to only as doctor so-and-so. There was no mention of specialties, background of training, education, etc. I think the wisdom of this is evident.

All of our men were urged to make their remarks in simple terms readily understood by the audience of laymen and to refrain from long-winded, involved answers. They did a fine job in that respect, and when it was necessary to use a medical term it was always explaned in lay language. We found that a little humor helped things along, but that it is possible to go too far with it. Once in a while a small disagreement among the panelists added spice to the evening if it wasn't just for the sake of being contrary.

We also found, after our first program, that it is wise for the moderator to first call the name of the doctor to whom he is about to direct a question, such as "Dr. Smith, here's one for you." This helps with the air of spontaniety. We did this after one of our men on the first program recognized his question and started reaching for his microphone before the moderator called his name.

Members of the panels were asked to be at the auditorium at least 15 minutes before the program opened. They were given final instructions about use of the microphones, how to walk on the stage, and things of this nature. They were lined up in the manner of their speaking arrangement, and they walked onto the stage from a backdrop curtain. The moderator and the speaker of the evening sat at a small table in the center of the stage, and the panelists were divided at two tables, one on each side. The moderator introduced himself, the panel members and then the speaker of the evening. The audence was helped to identify the panelists by having a name plate for each man on the table in front of him. The speaker of the evening led off with his discussion, and when he finished, we got right into the business of firing questions at the panelists.

We gave each panelist one question before giving any a second. Naturally, many of the men were not accustomed to appearing before large lay audiences and using a microphone. Even doctors get mike fright.

All we used in the way of props or ornamentation, was a plain backdrop, and

(Continued on Page 151)

EDITORIALS

A NEW EFFORT TO SERVE YOU

The Editor asked that I undertake the duties of Medical Editorial Editor for the ensuing year. This was done in the hope of bringing to our editorial pages brief and concise discussions of scientific subjects which may be of timely information and interest to the readers. Believing that such a policy is a forward step in improving our journal, I have gladly accepted his assignment.

This function can be carried out satisfactorily only with the cooperation of a number of physicians from different sections of the state, representing the various fields of practice. It is hoped that a healthy exchange of ideas may result which will improve the professional care of our patients by dissemination of helpful and sound principles of procedure.

The present medical literature is voluminous and no one physician, even in his chosen specialty, can hope to cover or digest thoroughly the opinions pertaining to his particular field of work. Each of us, from time to time, will pursue a subject thoroughly and will formulate from our reading and personal experience opinions that may be useful to others. It is such a digest of literature, flavored with our personal experience, which we hope, during the year, to bring to this page.

In pursuance of this policy, I shall take the liberty to request from various physicians over the state editorial comment. The volunteer contribution of such articles on what our members consider timely subjects, will be most gratefully received. All are invited to enter into this forum of discussion.

It is hoped that we may use two or more editorials of this type in each issue of the journal. They must, therefore, necessarily be short, and it is felt that limitation of length to 550 words is desirable. Such editing of the article as is necessary will be attempted, with a view of preserving the writer's thought and intent as exactly as possible. Whether or not the opinion expressed coincides exactly with my own or that of the editor, is not important. Ours will deal primarily with subjects of scientific interest, leaving to the Editor his prerogative of presenting subjects bearing on policy and procedure of the association.

With these objectives in view, I solicit your help in making this feature of the journal constructive.

Sam A. Overstreet, M.D.

GASTRECTOMY FOR ULCER IS NOT ALWAYS A CURE

Gastrectomy has become an increasingly useful surgical procedure during the past ten years. This has been due to several factors, chiefly the better understanding of gastric physiology, better surgical techniques and use of the newer antibiotics. Many lives have been thereby prolonged and the chronic gastrointestinal invalid is frequently returned to useful, if limited, activity. These survivors of gastric surgery, however, have a special problem of medical care which often receives less consideration than it deserves.

The patient often assumes, if he is not encouraged to believe, that he is free from the handicaps of a complicated ulcer which has dogged him for so many years, that he may eat and drink as he pleases without fear of penalty, that the cause of all his previous troubles has been corrected. He should be taught, on the contrary, that he has not been returned to a normal state and that he must observe a careful regimen of dietary care and activity if he is to enjoy the greatest benefit from his reconstructed stomach.

All of the secretory surface of the stomach cannot and should not be removed. The gastric content is emptied into the jejunum with less benefit of the biliary and pancreatic secretion than is possible in the normal duodenal passage. The benefit of the pyloric sphincter is lost and there is less adequate mixture of food with gastric content. This incomplete mixture is emptied more rapidly into a portion of the bowel less resistant to ulceration than is the normal duodenum.

The possibility then of the development of a stomal or jejunal ulcer is always a threat. It occurs in perhaps ten per cent of those patients who had a gastrectomy because of a chronic or complicated duodenal ulcer. Obstruction in the efferent loop from adhesions or inflammation is, also, a possibility. That ill defined and poorly understood sequela, the "dumping syndrome", must occasionally be encountered.

When any of these complications occur the patient is really in jeopardy and the physician has upon his hands a perplexing problem. It is true that these ulcers may heal with the same careful dietary and medical regulation which brings about the healing of a simple duodenal ulcer. It will require more careful and prolonged medical treatment, however, and the possibility of another surgical procedure is, of course, imminent.

The military services regard the patient who has had a gastrectomy as, at least partially, incapacitated and are likely to separate him from duty with a disability. We have been too prone in civil practice to regard him as a normal individual capable of pursuing his previous occupation without the necessity of constant medical supervision. Actually, he is handicapped and his future care should be based upon that premise.

When these patients are told that there is a reasonably high probability of developing another ulcer, and when they are led to pursue a more moderate course with respect to activity and diet we may expect more satisfactory permanent results from gastrectomy. A month or more after a gastrectomy has been done a careful x-ray study should be made and the function of the stomach recorded. An x-ray study should be repeated at the end of six months, a year, and thereafter when indicated. These studies and the patient's clinical progress should serve as a guide to the physician in the individual observation and care of each patient.

SAM A. OVERSTREET, M.D.

OFFICE BIOPSY - DO IT YOURSELF

Cancer-suspicious lesions seen in the office may be handled in one of three ways: they may be "watched", they may be referred, or they may be biopsied. "Watching" possible new growth often only causes delay and has little to recommend it. Referral for a biopsy is inconvenient, sometimes expensive, and may result in delay. However, referral is acceptable and widely practiced where the patient is reliable, will follow instructions, and the second doctor is nearby. Delay may not be the only factor in failure to cure cancer, but it is the largest factor under our control. Immediate biopsy is the most satisfactory rule to follow in the office when cancer is even considered.

Office biopsy can be used in three areas of the body: the skin, the cervix and vagina, and the mouth. A wedge may be taken from skin lesions, or the entire lesion excised when it is small, for pathologic diagnosis. Moles must always be excised rather than cauterized since the experience of many has shown that no one can *always* distinguish melanoma from benign nevus. Basal and squamous cell cancers of the skin are nearly all curable in most stages.

A biopsy taken of every abnormal cervix is the only way of detecting stage 1 cancers of this structure, which are generally considered to be curable in eight cases out of ten. The mouth is a neglected region where cancer occurs as commonly in white males as does rectal cancer and where detection is simply a matter of looking, feeling and biopsying. Since a greater variety of pathologic lesions occurs in the mouth than in any other area of comparable size, patients' safety demands many mouth biopsies. Early mouth cancers are curable in six cases out of ten.

Although only about one quarter of all cancers may be diagnosed by biopsy of the three sites mentioned above, this is the most highly curable group of cancers where diligence in early detection is distinctly rewarding.

Lay education of the public in cancer has produced with irritating frequency mild cancerphobes who pester physicians with insignificant lesions. This is a necessary evil, however, and such patients must be treated with careful, courteous consideration lest they neglect their next really suspicious symptom for fear of ridicule by the physician.

Much belaboring of points on biopsy technique has made the busy practitioner

Opinions expressed in contributions to this journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

hesitate to perform an office biopsy; thus he moves regrettably further away from active participation in diagnosing and treating cancer, and some patients lose the chance of early diagnosis. The best biopsy technique is that which works best for each physician, and practice alone will determine this. Four points bear emphasis: (1) the instrument used must be sharp; (2) the best fixative is formalin, obtained as outlined below; (3) the specimen should be as deep as possible and preferably 4 mm. in diameter; (4) complete clinical information should go with the specimen to the pathologist. The danger of injecting a local anesthetic into part of the lesion and possibly promoting spread in opened lymphatics is probably not great and certainly a risk to be preferred to the risk of delay in diagnosis.

Considerable convenience in office biopsy is now being offered by the Kentucky State Department of Health, which is distributing a free biopsy kit containing bottles with formalin, forms, mailing containers and a few instructions regarding handling of the specimen. Indigent patients will not be charged if the proper form is signed; additional kits may be obtained for the asking through local health departments.

Condict Moore, M. D.

THE COUNTY PRESENTS

(Continued from Page 148)

green cloth to cover the top, ends, and front of the tables. We decided on the green cloth after our first program— after watching those restless legs and feet while the panelists anticipated a question or heard another man answer one.

We discarded a suggestion to have the stage decorated with greenery and perhaps a large reproduction of the caduceus on a special backdrop, because we wanted utmost simplicity. After all, our men were a group of busy doctors using their time to do something for the community. They were not professional actors trying to stage an elaborate production. I believe this decision was a wise one, because from the back of the auditorium the picture of our men, seated at their tables, was an impressive one. Every single man handled himself in superb fashion.

Now, something about the publicity. The newspaper assigned a reporter to handle this, the same man who, by the way, has covered our medical society meetings and all our affairs for the last seven years. He does a beautiful job and he is our friend.

After the first announcement stories we received our greatest publicity along in September, a month before the series started. After daily stories on the voting for subjects, came the daily story accompanying the coupon for questions. Then on each Saturday afternoon of the day preceding the forum, the newspaper ran an eight column layout of pictures of the panelists across the bottom of the front page. A local photographer made these photographs in advance. He made no charge because the newspaper gave him a credit line. On Sunday morning a picture of the speaker was printed with a good story on the program.

The morning newspaper thought enough of the news value of the forums that they covered them in detail and played the story prominently on Page One every Monday morning. The afternoon paper, which was co-sponsoring the forums, played up the story on Page One of their Monday editions. I think the forum series gave all of our men a little different slant on the matter of the physician and personal publicity, and perhaps a broader viewpoint.

As I have said, the forums are flexible. Many counties have no daily newspapers, but there is no good reason why you could not work with a weekly newspaper. Your forums could be spaced at two or three week intervals. There are many ways to work it out, and your newspaper editor can furnish many of the answers in planning a publicity schedule.

ORGANIZATION SECTION

Officers Conference at Lexington, Apr. 7, Attracts Top Speakers

"The Vertical Approach to Community Influence," will be discussed by C. Elliott Bell, M.D., Decatur, Illinois, nationally recognized authority on county medical society public service programs, as one of the feature presentations of the Fifth Annual County Society Officers Conference at the Phoenix Hotel in Lexington, Thursday, April 4.

Dr. Bell

"Dr. Bell's discussion," said KSMA President Clyde Sparks, M.D., Ashland, "is one of many outstanding presentations that will be given at this day-long session by top experts in the nation on medical organization problems."

Walter L. Portteus, M.D., Franklin, Indiana, president of the Indiana State Medical Association, who has appeared on various national programs, has distinguished himself in the field of small county medical society public relations activities. Dr. Portteus's talk at the Conference will deal with practical physician-patient relations in the field of fees, statements, etc., Dr. Sparks said.

Ernest B. Howard, M.D., Chicago, assistant secretary of the American Medical Association, widely recognized as one of the more astute students of medical organization problems, has also accepted a place on the 1955 conference program. Dr. Howard will discuss practical, everyday benefits the AMA continuously provides its members.

Dr. Howard

Branham B. Baughman, M.D., Frankfort, KSMA council chairman, announced that the practice of providing the county medical society leaders with a scheduled opportunity to meet with councilor at the Conference would be re-established. These sessions by the various districts will be held simultaneously and be of great value both to the officers and the councilors, Dr. Baughman said.

Other features of the Conference will include a panel presented by representatives of the various countries, featuring some outstanding project. A half-hour movie, suitable for use on television, will be shown prior to the conference.

Dr. Sparks said county medical society officers and committee chairmen would find this session most profitable. In calling their attendance a virtual "must" for the county officials, Dr. Sparks said not only were county officers warmly invited but all KSMA members would be cordially welcomed.

Dr. Portteus

The KSMA president said the complete program would be announced in the March issue of the Journal of KSMA.

Two New Departments to be Edited by Drs. Overstreet and Coe

Two new regular features, which will be edited by Sam A. Overstreet, M.D., and Walter S. Coe, M.D., both of Louisville, make their first appearance in this issue of the Journal of the Kentucky State Medical Association, Bruce Underwood, M.D., Louisville, Editor, has announced.

Dr. Overstreet will edit the Medical Editorial Department, and Dr. Coe will be the editor of the new Book Review Department, which will be called "In the Books."

The new medical editorial feature will make possible appropriate and immediate comment on subjects of current and seasonal interest. It was pointed out that this cannot be accomplished as quickly with a full length scientific paper because necessary procedures require up to several months for publication.

Publishers of medical literature have responded in a most gratifying manner, it was stated, to the announcement that Dr. Coe will

edit a new book review department in the Journal. Copies of all volumes reviewed will become the property of the library of the University of Louisville School of Medicine, where Dr. Coe is chief of the section of general medicine.

Guy Aud, M.D., Louisville, chairman of the Advisory Committee to the Editor, expressed his satisfaction with the establishment of these two new features, stating they would add much to the worth of the Journal.

Both Dr. Overstreet and Dr. Coe, in introducing their departments, indicate that the services of other KSMA members will be needed and requested in their conduct of the departments.

Dr. Hancock to Retire as Surgical Congress Chief, February 24

J. Duffy Hancock, M.D., Louisville, immediate past president of KSMA, will conclude his term as president of the Southeastern Surgical Congress at the 1955 annual meeting, which will be held February 21-24 at the Atlanta Biltmore Hotel, Atlanta, Georgia.

Dr. Hancock

"Factors Contributing to the Progress of Surgery in the Past Twenty-Five Years" will be the subject of the presidential address. The Congress will celebrate its 25th anniversary this year. It will be held in conjunction with the Atlanta Graduate Medical Assembly, which will feature 51 essayists.

Clyde C. Sparks, M.D., Ashland, KSMA president, is the Councilor for Kentucky for the Congress. Donald S. Daniel, M.D., Richmond, Virginia, will succeed Dr. Hancock as president.

Rufus Alley, M.D., and John B. Floyd, Jr., M.D., both of Lexington, will present a paper during the assembly entitled "Complete Rectal Prolapse and the Orr Suspension Treatment," and Irvin Abell, Jr., M.D., Louisville, will talk on "Changing Concepts in the Surgical Management of Cholecystic Disease."

The Congress, which held its 1953 annual session in Louisville, expects to register over 600 surgeons. B. T. Beasley, M.D., Atlanta, is the secretary of the Congress.

U of L to Admit 124 Freshman Medical Students in '55

The freshman class this fall at the University of Louisville School of Medicine will be the largest in its history—and if 124 Kentucky students can meet the entrance requirements it will be an all-Kentucky class, it was announced by J. Murray Kinsman, M.D., Louisville, Dean of the School of Medicine, after a meeting of the university board of trustees, January 6.

If there are not enough Kentucky students to make up the enrollment, out-of-state students will be admitted in the following order, according to Dr. Phillip Davidson, University of Louisville president: first, children of alumni, second, students who completed their undergraduate training in Kentucky colleges and universities, and last, all other out-of-state students.

The president said it was hoped that tuition and fees could meet the initial costs of the enlarged program, but "ultimately we will have to find additional support for the medical school." He pointed out that the cost of educating a medical student increases as the student progresses. A total of 385 students are enrolled this year.

As a sufficient number of patients with whom students can work in their junior and senior years is a requirement of a good medical school, according to Dr. Davidson, the opening of the new Jewish Hospital in Louisville with 126 beds, as a teaching hospital is a factor making the enlargement of the class possible. The present Jewish Hospital is not a teaching hospital, it was explained.

Ky., National OB & GYN Groups Meet in Louisville Mar. 31-Apr. 2

The Kentucky Obstetrical and Gynecological Society's 1955 annual meeting, scheduled at the Brown Hotel, Friday, April 1, will be one of four state sectional and national meetings in this field held in Louisville that week, J. B. Marshall, M.D., Louisville, president of the Kentucky group, said.

The Continental Obstetrical and Gynecological Society will hold two morning Scientific Sessions during its meeting, Thursday and Friday, March 31 and April 1, at the Rankin Amphitheatre at the Louisville General Hospital, it was stated by Laman Gray, M.D., Louisville, program chairman.

District 5 of the American Academy of Obstetrics and Gynecology will meet Saturday, April 2, in the Crystal Ball Room of the Brown Hotel. W. O. Johnson, M.D., Louisville, is vice-chairman of the 5th District, which is composed of the states of Kentucky, Indiana, Ohio and Michigan. The state chairman for the district is Silas H. Starr, M.D., Louisville, and the vice-chairman is A. J. Whitehouse, M.D., Lexington.

Meeting jointly with District 5 will be the Tri-City Obstetrical and Gynecological Society. The Louisville Society will act as host to the Cincinnati and Indianapolis physicians. William E. Oldham, M.D., Louisville, will preside over the Tri-City group.

Additional information on these four meetings will appear in the March issue of the Journal of KSMA. Dr. Gray is also program chairman for the groups meeting Saturday.

Louisville Surgeons to Participate in ACS Meeting, Nashville

Two Louisville surgeons will participate in the scientific program of the Sectional Meeting of the American College of Surgeons at Nashville, Tennessee, April 4-6.

On the morning of April 6, Pat R. Imes, M.D., Louisville, will preside over the scientific session. Among the participants that morning will be Rudolf J. Noer, M.D., Louisville, who will discuss "Diverticulitis."

The scientific meeting will be held in the War Memorial Auditorium. All interested Kentucky physicians are invited to attend. James A. Kirtley, Jr., M.D., Nashville, is chairman of the local arrangements committee.

Subjects to be covered include an extensive symposium on Management of Auto Accident Victims, with discussions by representatives of all physicians likely to be involved in such cases, panel discussions on Bile Duct Injuries and Peptic Ulcers, Cardiovascular Surgery, and a Symposium on Cancer.

Dr. Kokko Given Appointment

U. Pentti Kokko, M.D., Louisville, who has been serving as director of the Division of Preventive Medicine of the State Department of Health, was appointed director of the Division of Local Health Services, January 5.

W. F. Lamb, M.D., Louisville, State deputy health commissioner, announced the appointment by Bruce Underwood, M.D., State health commissioner. Dr. Kokko has been with the Department since 1953.

KSMA, Jeff. Co. & Dean Cooperate in Senior Day Plan April 18

The first "Senior Day" for the fourth year class at the University of Louisville School of Medicine will be held at the Kentucky Hotel in Louisville, Monday, April 18, W. Vinson Pierce, M.D., Covington, chairman of the special Senior Day Committee, announced.

Plans call for a full afternoon program on problems faced by the young physician entering practice. This will take the form of brief talks, panels, and small discussion groups.

At the evening meal, the Jefferson County Medical Society members will personally be hosts to members of the senior class at the social hour dinner and the meeting of the Society. Following a brief business session, a physician speaker of national prominence will give the principal address of the day.

"Our Committee," Dr. Pierce said, "is most grateful for the cooperation of the Jefferson County Medical Society in this worthy project. In addition, the effective support and enthusiasm manifested by J. Murray Kinsman, M.D., Dean of the School of Medicine, is deeply appreciated."

Complete information on the program will be published in the March issue of the Journal of KSMA, Dr. Pierce said. Other members of the Senior Day Committee are: Karl Winter, M.D., Glenn Bryant, M.D., and W. O. Johnson, M.D., all of Louisville.

Kentucky A. G. P. Session Apr. 20-21 to Feature 7 Guest Speakers

Seven nationally known physicians and the editor of a prominent magazine will be the featured guest speakers at the 1955 annual meeting of the Kentucky Chapter of the American Academy of General Practice at the Brown Hotel, April 20 and 21.

According to Garnett Sweeney, M.D., Liberty, president of the Academy, five KSMA members will also formally take part. The guest speakers who will participate, will come from as far away as Boston and New Orleans.

Charles G. Bryant, M.D., Louisville program chairman, stated that a complete program for the meeting will be carried in the March issue of the Journal of the K.S.M.A.

One of the highlights of the session will be the dinner meeting, Wednesday evening, April 20, Dr. Bryant said. The chapter will hold its business meeting later that same afternoon.

Dr. Sweeney will preside at the Wednesday

session and H. Burl Mack, M.D., Pewee Valley, will officiate at the final meeting, Thursday. Dr. Mack said all K.S.M.A. members are cordially invited to attend the scientific and dinner meetings.

Dr. Lich Publishes Text, "The Compendium of Urology"

"The Compendium of Urology" is the title of a book written by Robert Lich, M.D., professor and chairman of the Section on Urology, University of Louisville School of Medicine, and chief of staff at the University Medical Center.

Dr. Lich

The book was written, according to the author, with a dual purpose in mind, to act as a quick diagnostic and basic therapeutic reference for the physician in general practice and to serve as a student text. It is currently being used as a textbook at the University of Louisville School of Medicine.

Dr. Lich has published more than 70 papers in national medical journals, has lectured at a number of the larger medical groups, and has served as chairman of the Urologic Section of several national specialty group organizations.

Dr. Lich's book, which is generously illustrated, is being reviewed in the new department "In the Books" in this issue of the Journal.

Rural Health Council Movement in Ky. Praised by Theodore Gold

The 1955 Kentucky Rural Health Conference, held in Louisville January 20, was attended by 162 physicians, farmers, homemakers, and other interested persons, representing 32 counties, according to Wyatt Norvell, M.D., New Castle, chairman of the Kentucky Rural Health Council, which, in conjunction with the K.S.M.A. Rural Health Committee, which Dr. Norvell also heads, sponsored the meeting.

Highlights of the conference were the luncheon address by Theodore Gold, Washington, D. C., assistant to the undersecretary of Agriculture, group discussions which followed talks on nutrition, immunization and sanitation, and a dramatic presentation by the staff of WAVE,

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Louisville, entitled, "This WAS Your Life—Death's Annual Report."

Mr. Gold called to the attention of the conference that it is a grave mistake for the people to rely too fully on government at any level for the solution of their problems. He praised the rural health council movement in Kentucky and the nation as an important way through which people can work together voluntarily at the community level in the solution of their own problems.

The dramatization, prepared under the direction of Paul Grubbs of the Kentucky Farm Bureau Federation, presented Mr. Death and some of his team, including Mrs. No Immunization, Mr. Unsanitation, Mr. Bad Nutrition, and "Good Old T.B." in a recount of their year's work. The playlet also emphasized the role that has and can be filled by local rural health councils in combatting these health problems.

The meeting was opened with greetings by Clyde C. Sparks, M.D., Ashland, president of K.S.M.A. During the morning session a discussion of immunization as it concerns the layman was presented by Garnett Sweeney, M.D., Liberty, president of the Kentucky Chapter of the American Academy of General Practice.

Other morning speakers included Statie E. Erikson, Ph.D., Lexington, director of the University of Kentucky School of Home Economics, who spoke on nutrition; A. S. Barnes, D.V.M., Frankfort, U. S. Department of Agriculture of Animal Industry, on dairy sanitation; and J. C. Stewart, of the Kentucky State Department of Health, on school sanitation.

Group discussions were held in the afternoon. The following persons served as chairmen: Miss Myrtle Weldon, Lexington, state leader of Home Demonstration Agents; E. M. Josey, Frankfort, executive secretary of the Kentucky Pharmaceutical Association, and E. P. Hilton, Frankfort, director of agriculture education, Kentucky State Department of Education. Reports on the group discussions were made to the conference.

Dr. Norvell expressed his gratification at the number of physicians who attended the conferences and expressed the hope that K.S.M.A. members will become active in promoting the rural health council movement in Kentucky.

The schedule of future Annual Sessions of The American College of Physicians has been announced by the College as follows: In 1955, the Session will be held in Philadelphia, Pennsylvania, April 25-29, and in 1956, it will be in Los Angeles, California, April 16-20.

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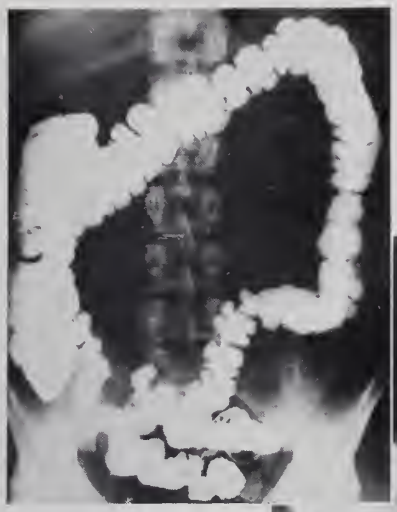

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SEARLE

Dr. Pirkey Urges KSMA Scientific Exhibitors to Apply Early

K.S.M.A. members planning to apply for space in the Scientific Exhibit Section at the Annual K.S.M.A. Meeting, September 27, 28 and 29, 1955, in Louisville, should do so now, according to Everett L. Pirkey, M.D., Louisville, chairman of the Committee on Scientific Exhibits.

"Present indications are that the scientific exhibits in this year's meeting will be better than average," Dr. Pirkey said. He urged that members desiring space should complete the application found on page 164 and mail it to him at an early date.

It was pointed out by Dr. Pirkey that this matter was being brought to the attention of prospective exhibitors earlier this year because of the increasing interest and in order to make possible a better exhibit. The deadline for receiving applications is July 1, 1955.

Those planning exhibits are asked to study the diagram of the booth on the application form on page 164. The exhibitors are urged to utilize the space as efficiently as possible in order that more exhibitors may be admitted.

Other committee members are: D. W. Barrow, M.D., Lexington, Howell J. Davis, M.D., Owensboro, William P. Humphrey, M.D., Sturgis, Arthur F. Shultz, M.D., Newport, and Paul J. Sides, M.D., Lancaster.

AMA-Legion Plan Joint Study of Veterans' Hospitalization

A joint study of veterans' hospitalization by the American Medical Association and the American Legion, aimed at removing that issue "from the area of name-calling and propaganda", was suggested by Seaborn P. Collins, Las Cruces, New Mexico, American Legion Commander, who appeared before the House of Delegates on the opening day of the A.M.A.'s Eighth Annual Clinical Meeting in Miami, November 29, 1954.

Acting upon Mr. Collins' suggestion, the Board of Trustees of A.M.A. selected President-Elect Elmer Hess, M.D., Erie, Pennsylvania, David Allman, M.D., Atlantic City, New Jersey, a member of the Board, and Louis Orr, M.D., Orlando, Florida, chairman of the A. M. A. Committee on Federal Medical Service, to participate in the study.

Mr. Collins devoted virtually his entire address to the issue of veterans' hospitalization. "The American Legion neither expects nor wants the government to give carte blanche

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entitlement to medical care to all veterans," he said. "The VA's goal is 128,000 beds—for more than 20 million veterans.

"We are not seeking any major increases in this goal. At the same time, the Legion does not want to see any war veteran who is sick and in need go without proper treatment."

First Dist. to Hear Dr. Troutman at Murray, February 17

Woodford B. Troutman, M.D., Louisville, will discuss "The Treatment of Coronary Artery Disease" at the first 1955 meeting of the First Councilor District at Murray, February 17.

According to J. Vernon Pace, M.D., Paducah, who made the announcement, Hugh Houston, M.D., Murray, is making the arrangements for the meeting, which will be held on the campus of the Murray State Teachers' College in the Scientific Building. Dr. Ralph Wood, president of the school, will welcome the attending physicians.

The meeting will conclude Heart Day in Murray, Dr. Houston said. Dr. Troutman, who limits his practice to Cardiology, will speak at the Murray Rotary Club and hold a number of clinics as a part of the special day's activities.

Dr. Pierce to Head Kentucky Physicians Mutual

Vinson Pierce, M.D., Covington, succeeded T. O. Meredith, M.D., Harrodsburg, as president of the Kentucky Physicians Mutual, Inc., at the annual meeting of the board of directors.

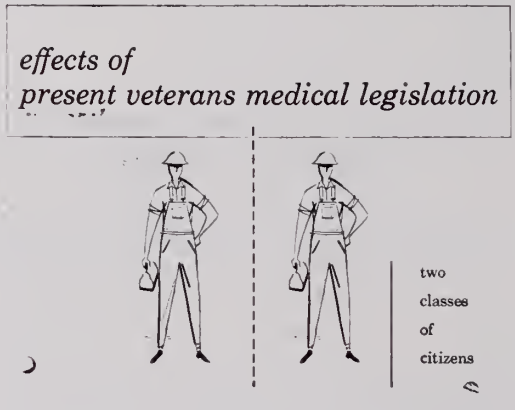
Other officers elected were: First vice-president, Joseph C. Bell, M.D., Louisville; Second vice-president, A. L. Cooper, M.D., Somerset; Secretary, Mr. Raymond F. Dixon, Louisville; Treasurer, B. B. Baughman, M.D., Frankfort; Assistant Treasurer, Mr. Dixon; Executive Director, Mr. D. Lane Tynes, Louisville; Medical Consultant, Stanley Simmons, M.D., Louisville.

The board selected the following men to serve as members of the Executive Committee: Dr. Pierce, chairman, Dr. Bell, vice-chairman, Dr. Baughman, Coleman C. Johnston, M.D., Lexington, J. B. Lukins, M.D., Louisville, Oscar O. Miller, M.D., Louisville, Mr. R. A. Dean, Sr., Dr. Meredith, and Mr. Dixon, secretary.

In Viewing the VA Medical Program . . .

The medical profession stands for the highest quality medical care for all citizens. Veterans, as citizens, should accept the responsibility for their own health needs—unless they became disabled as a result of military service; then it is the responsibility of the Veterans Administration to provide medical care and hospitalization. Because many communities do not as yet have adequate facilities to care for war veterans with non-service-connected tuberculosis or neuropsychiatric disorders, the medical profession recommends that the VA continue—on a temporary basis—to treat these patients.

In Viewing the VA Medical Program . . .



It is the belief of the medical profession that it is unsound to authorize free lifetime medical care for veterans who suffered no mishap in uniform, while other citizens with no military background must pay their own way. Although the two men above are identical, they represent "two classes of citizens"—the veteran with no service-connected disability who is granted medical care at federal expense, and the non-veteran who must personally assume responsibility for his medical care.

Mr. Tynes reported that the enrollment as of September 30, 1954, exceeded 260,000. The Physicians Mutual is one of the Blue Shield Commission plans.

Advisory Committee to Assist in School Safety Program

A special advisory committee to assist the Kentucky State Department of Education in the development of a state-wide comprehensive accident prevention training program was formally organized in Frankfort, December 14, by Wendell Butler, state superintendent of public instruction.

The committee was formed at the suggestion of the K.S.M.A. Advisory Committee on Public Health under the chairmanship of C. C. Howard, M.D., Glasgow, who has worked closely with Mr. Butler in preliminary exploratory meetings which preceded the December 14 action.

It is contemplated, Dr. Howard reports, that the committee will work with the Department of Education in the promotion of a new emphasis on accident prevention in the schools in which all interested state groups will give aid.

An executive committee has been named, which will fully explore the possibilities of such an expanded program and report back to the entire committee at an early date.

Dr. Hess's Speech at 1954 Annual SMA Session Quoted*

"A physician who walks into a sick room is not alone. He can only minister to the ailing person with the material tools of scientific medicine—his faith in a higher power does the rest," Elmer Hess, Erie, Pennsylvania, president-elect of the American Medical Association, said at the 1954 annual meeting of the Southern Medical Association at St. Louis.

"Show me the doctor who denies the existence of the Supreme Being and I will say that he has no right to practice the healing art. . .

"Our medical schools are doing a magnificent job of teaching the fundamentals of scientific medicine. However, I'm afraid that the concentration of basic science is so great that the teaching of spiritual values is almost neglected.

"Any man who enters the medical profession with financial gain as his sole objective is a discredit to his colleagues. The marketplace is where you go to make money, not the sick-

room. Doctors take care of sick folks — period. . .

"Special attention must be given to the problems of those who are unable to pay for their own medical care, or buy insurance to protect themselves against such costs. We are urging state and county medical societies to make this a major project."

*Editor's Note: J. Farra Van Meter, M.D., Lexington, councilor for the 10th district, suggested that this quotation, which was printed in the November 22, 1954, issue of the Presbyterian Outlook, be carried in the Journal of KSMA.

Drs. Howard and Moberly Reappointed to State Board of Health

Governor Lawrence C. Wetherby, Frankfort, has announced the reappointment of E. M. Howard, M.D., Harlan, and Fred P. Moberly, M.D., Lexington, as members of the State Board of Health.

The announcement was made on January 4. They were reappointed for terms which will expire December 31, 1958.

Dr. Howard has served on the State Board of Health since July, 1928, and Dr. Moberly since March of 1954.

Changes Made in U. of L. Faculty

The following changes in the faculty of the University of Louisville School of Medicine have been announced by J. Murray Kinsman, M.D., Dean of the School of Medicine:

Appointment of Eugene Moore Holmes, M. D., as instructor in medicine, and John Ramsey Smith, M.D., as instructor in radiology; the reappointment of John Lyford, M.D., as assistant professor of orthopedic surgery; promotion of Joseph Goldstein, M.D., to associate professor of psychiatry; resignation of Richard George Burman, M.D., Kenneth William Chapman, M.D., and Janet Best, M.D.

AMA Announces Spring TV Series

The first program in the spring 1955 series of the "March of Medicine" over the National Broadcasting Company's television network will be carried on Sunday, February 26, according to the A.M.A. News Notes. The program is sponsored by Smith, Kline and French Laboratories in cooperation with the A.M.A.

The tentative schedule calls for additional programs during the weeks of March 28, April 26 and June 6. The sponsors also plan to present a three-program series in the fall, further details of which will be announced later by A.M.A.

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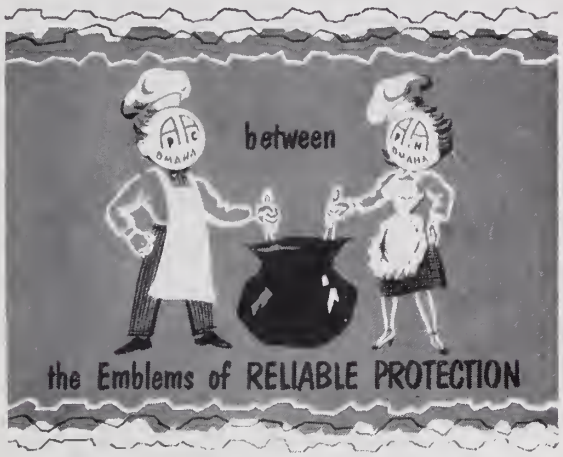

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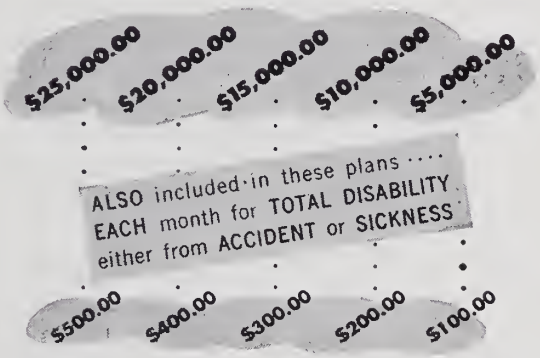

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Dr. Toomey is Injured in Accident

Lawrence O. Toomey, M.D., Bowling Green, councilor for the Sixth District, suffered fractures of both legs in an automobile accident, Sunday, December 19, 1954.

Dr. Toomey was removed to the Vanderbilt Hospital in Nashville following the accident, and one week later was taken to his residence. As we went to press, his recovery was reported as satisfactory.

Heart Program Available

Tape recordings, appropriately marked and labeled, of the proceedings at the Symposium on Cardiovascular Diseases January 21, which was sponsored by the Louisville Heart Association, are available for District and County Medical Societies, according to Miss Emma Crutcher, executive secretary of the organization.

In addition to the recordings, transcripts of the proceedings may be obtained by individual physicians for the cost of compiling, if sufficient requests are received, it was added, by writing the executive secretary at the organization's headquarters in the Columbia Building in Louisville.

The Eighth Annual Postgraduate Course on Diseases of the Chest will be held at the Bellevue-Stratford Hotel in Philadelphia, March 7-11, 1955, sponsored by the Council on Postgraduate Medical Education of the American College of Chest Physicians in cooperation with the respective state chapter of the College and the staffs and faculties of the local hospitals and medical schools of Philadelphia, according to a news release from the College. Tuition will be $75. Further information may be obtained by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago II, Illinois.

The December Secretary's Letter from the Illinois State Medical Association contained helpful suggestions for conducting a smooth and interesting scientific program at county medical societies. It was pointed out that all business sessions of county medical societies should be held after the guest speaker has appeared. "He should not be asked to wait to present his paper until local business has been transacted.. If he cares to remain at the business session following his presentation, that should be his prerogative, but the courtesy of speaking first should be offered him as a guest of the society."

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County Society Reports

CALLOWAY

The regular monthly meeting of the Calloway County Medical Society was held in the chapel of the Murray Hospital on November 2, 1954, with C. C. Lowry, M.D., presiding.

Motion was made by C. L. Tuttle, M.D., that the prenatal classes to be held at the Calloway County Health Center under the direction of Mrs. Pogue, R. N., be publicized in the local newspapers. Dr. Tuttle stated that the Society would cooperate in giving signed statements to those desiring to take the classes.

James A. Outland, M.D., reported that the recent T.B. Mobile X-ray drive revealed that many retakes should be made and asked that the members cooperate on this follow-up work. Dr. Outland told of the recent hepatitis survey. He stated that the public health service might investigate by analyzing the water in the area.

Hugh Houston, M.D., reported that the 1953 issues of "The Journal" had been bound into three volumes and were to be kept in the Hal Houston Memorial Library and that the 1952 and 1954 issues of "The Journal" would also be bound, as well as the 1946, 47 and 48 issues of the Journal of KSMA.

In addition to the above the following members were present: A. D. Butterworth, M.D., Charles Clark, M.D., Robert Hahs, M.D., C. H. Jones, M.D., O. K. Mason, M.D., Birdsall Carle, M.D. Administrator Warming was also present at the meeting, which was adjourned at 8:15 p.m.

J. L. Hopson, M.D., Secretary

PIKE

The Pike County Medical Society held its regular monthly meeting on November 16, 1954, in Pikeville, with approximately 25 members present. The meeting was called to order by Charles C. Rutledge, M.D., president.

A discussion was held concerning the appointment of a Pike County physician to the Blue Shield Medical Service Mutual Board. It was stressed that the physician accepting this position would be required to devote considerable time and energy in fulfilling his obligation. The names of William F. Clarke, M.D., and Ralph W. Allen, M.D., were proposed. Dr. Allen declined in view of his other obligations, and Dr. Clarke was then unanimously selected to represent Pike County in this capacity.

Dr. Clarke suggested that physicians in the county help their patients obtain Blue Cross-Blue Shield insurance by passing out the application cards, which could be obtained from him.

A nominating committee consisting of James C. Preston, M.D., William C. Hambley, M.D., and John H. Scott, M.D., presented the following nominations for the 1955 Pike County Society officers: President, Dr. Allen; vice-president, Russell H. Davis, M.D.; secretary-treasurer, Dr. Clarke, with G. N. Combs, M.D., as alternate. Dr. Clarke declined this nomination because of the Blue Shield appointment, and the nominations were closed by T. I. Doty, M.D. The officers elected were: Dr. Allen, president; Dr. Davis, vice-president; and Dr. Combs, secretary-treasurer.

Russell H. Davis, M.D., Secretary

SHELBY-OLDHAM

The Shelby-Oldham Medical Society held its regular monthly meeting at the Stone Inn in Shelbyville on Thursday, December 16, as guests of A. C. Weakley, M.D. After the dinner, B. F. Shields, M.D., president, called the meeting to order.

The annual election of officers was held with the following elections: L. A. Wahle, president; M. H. Skaggs, president-elect; C. C. Risk, secretary.

George Perrine, M.D., introduced the names of John H. Leland, M.D., and John R. Miller, M.D., for membership in the Society.

C. C. Risk, M.D., secretary, announced the death of Frank L. Lapsley, M.D., a member of the Society for many years. Alfred Doak, M.D., Dr. Weakley, and Don Chatham, M.D., were appointed as a committee to draw up resolutions on Dr. Lapsley's death.

Dr. Weakley introduced William Hagan, M.D., of Louisville, who presented a paper entitled "Liver Surgery."

Other members and guests present were: L. A. Wahle, M.D., A. L. Heise, D.D.S., J. T. Walsh, M.D., B.B. Sleadd, M.D., M. D. Klein, M.D., H. H. Richeson, M.D., H. T. Alexander, M.D., Charles Chatham, D.D.S., H. B. Mack, M.D., J. P. McKee, M.D., and S. B. May, M.D.

C. C. Risk, M.D., Secretary

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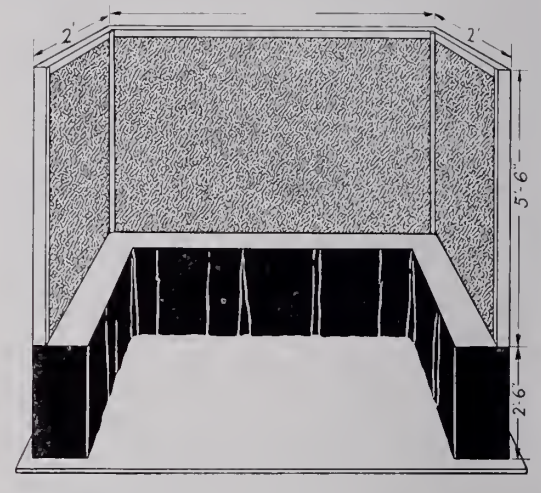

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1. American Medical Association: New and Nonofficial Remedies. J. B. Lippincott Co., Philadelphia, 1954, p. 147.

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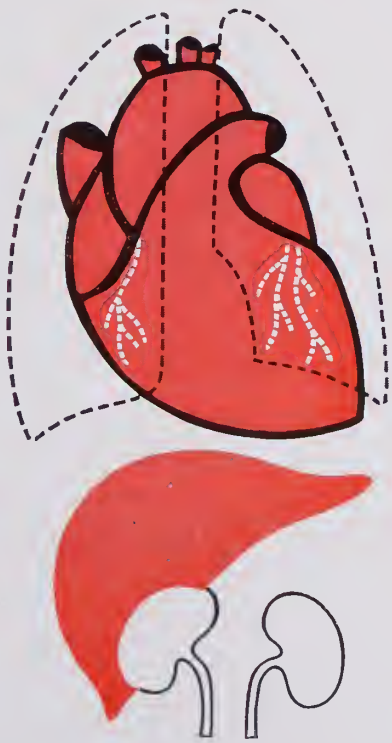

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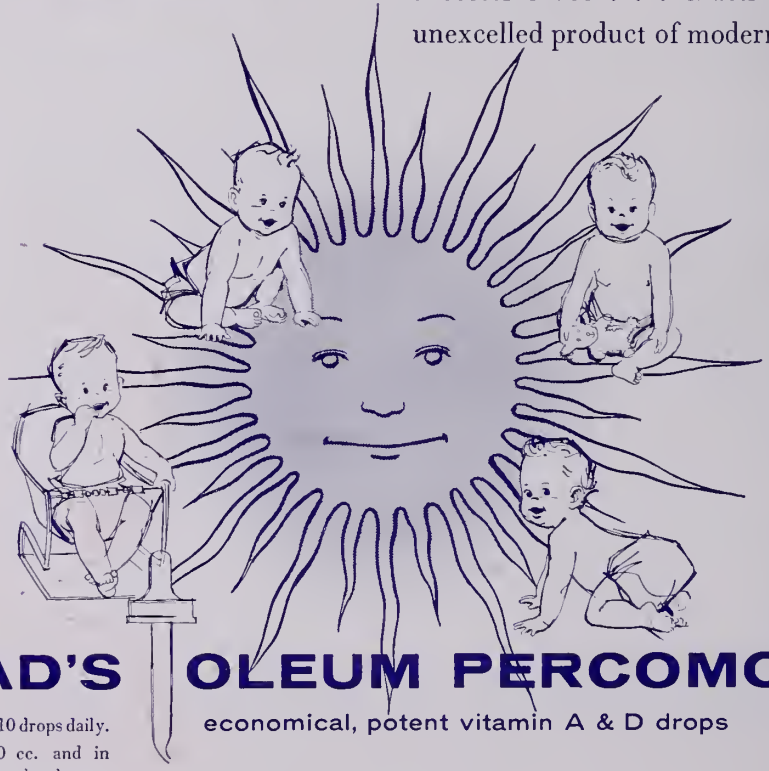

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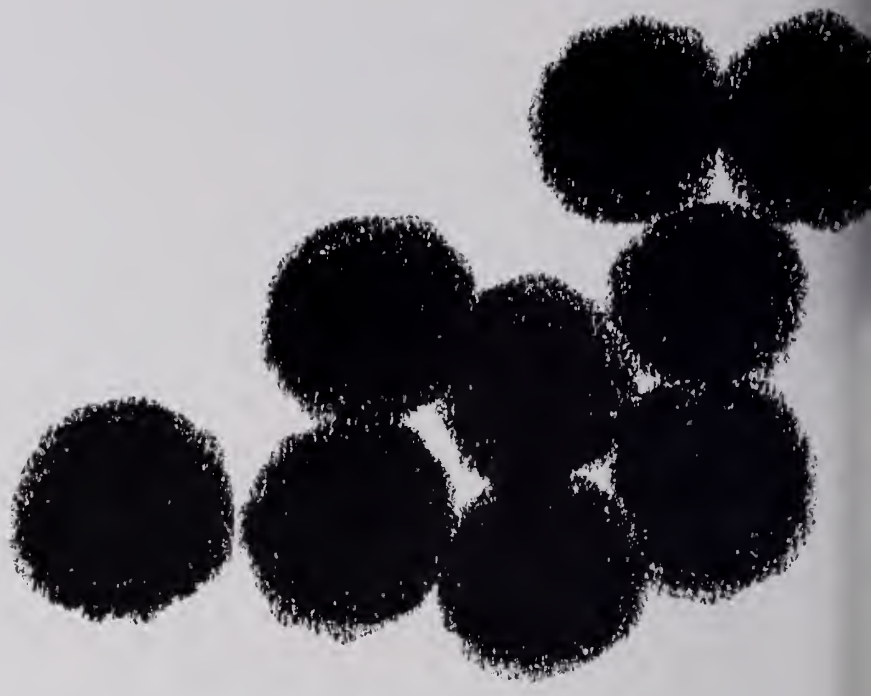

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*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

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President's Page

As vice-president, representing the Central District, I wish to extend greetings from my fellow physicians of Jefferson County and to assure you of their whole-hearted support of the Kentucky State Medical Association and its program.

In times past, it has been said, and even at the present time mentioned, that my district would like to run or control the State Association. If anyone holds this opinion, I want to assure him that we have no desire to do so. We have no ambitions other than to take care of our own duties well and to cooperate with you physicians in other districts so that medical progress can continue to remain in the forefront among the other states, both professionally and forensically, for the ultimate benefit of the people.

We believe in careful cultivation of our professional and social relationships for better mutual understanding and cooperation and pledge ourselves to this ideal.

ARTHUR T. HURST, M. D.
Vice-President, Central District
Kentucky State Medical Association.

ELECTRON PHOTOMICROGRAPH

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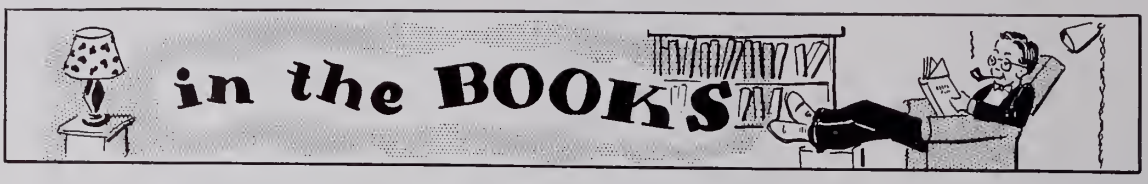

DIAGNOSTIC LABORATORY HEMATOLOGY: by George E. Cartwright; Grunne and Stratton: 114 pages

This is a compact concise manual of 114 pages giving simple instructions for the performance of at least one test for almost every significant test in use in studying abnormal blood. The tests are well chosen, instructions are clear and form a reliable guide for the student or practitioner for performing these tests. Discussion of the interpretation of results is somewhat limited, but the book is not intended to replace textbooks in hematology.

For the most part the tests chosen represent the simplest and most satisfactory procedures to obtain the information desired. The use throughout the book of Bard-Parker blades rather than expendible stylets might be questioned because of the current interest in the transmission of Infectious Hepatitis. Other than this there is very little to criticise.

In the opinion of this reviewer, this small volume should be a valuable addition to the library of the student or practitioner in his study of diseases of the blood.

Marion F. Beard, M.D.

PEDIATRIC DIAGNOSIS: by Morris Green, M.D., and Julius B. Richmond, M.D.; W. B. Saunders Company; 436 pages; $10.00

This ambitious book attempts to cover a great deal in its four sections entitled: (1) Introduction; (2) Physical Examination; (3) Signs and Symptoms; and (4) Health Supervision. The text reflects a broad clinical experience on the part of the authors.

The fourth section is outstanding in quality and organization; it is refreshing to note therein a proper balance between attention to physical and to the emotional-social aspects. Noting the swing toward the latter side, the authors wisely state, "It is important, however, that this trend not become associated with a diminished interest and competence in the management of physical problems of children."

The book does not confine itself to diagnosis (as titled) nor to diagnostic assessment of signs and symptoms. It is lamentably remarkable, in view of the subject, that there are only eight figures, and no photographs.

The text is crammed with information and suffers from fewer factual inaccuracies and language violations than do many books. The content does not necessarily follow the chapter headings. A single example will suffice: "The Neurologic Examination" gives no description of conducting a neurological examination; it describes various morbid neurological syndromes. Therapeutic considerations are sprinkled here and there, but always as an aside, leading to curt statements in which clarity and occasionally accuracy are lost.

The book will probably have its greatest use as a manual in the supervised clinical training of house officers in pediatrics. The up to date references given in the body of the text are most commendable.

Alex J. Steigman, M.D.

"VAGINAL HYSTERECTOMY: INDICATIONS, TECHNIQUE AND COMPLICATIONS" by Laman A. Gray, A.B., M.D., F.A.C.S.; Charles C. Thomas, Springfield, Illinois, 1955; 137 pages; $4.75

This volume is a thoughtfully planned and well executed presentation of pertinent data on an operation which is being increasingly used. It is not intended as a book for the occasional operator, but, as the author states, for use of "the operator who performs a generous amount of pelvic surgery, and vaginal hysterectomies at intervals" and as a ready reference for residents in training for the field of gynecology.

The material is developed in an orderly fashion, proceeding from the uses, indications and contraindications, through operative steps to post-operative care and possible complications. The fact that only 36 of the 124 pages are devoted to the operative technique itself is testimony to the care exercised by the author to provide a complete consideration of all aspects of the subject.

The typography and format are excellent, the illustrations clear and to the point. Of particular interest is the very complete historical summary covering the development of vaginal hysterectomy from the first successful operation in 1813 to the present day.

This is clearly presented and well-illustrated monograph, which should be of great interest to all surgeons working in this field.

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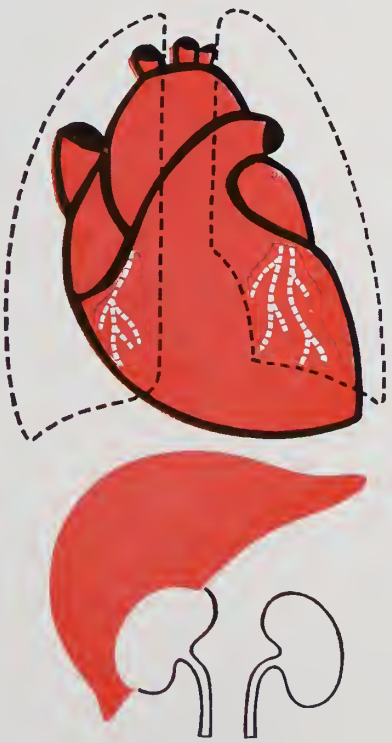

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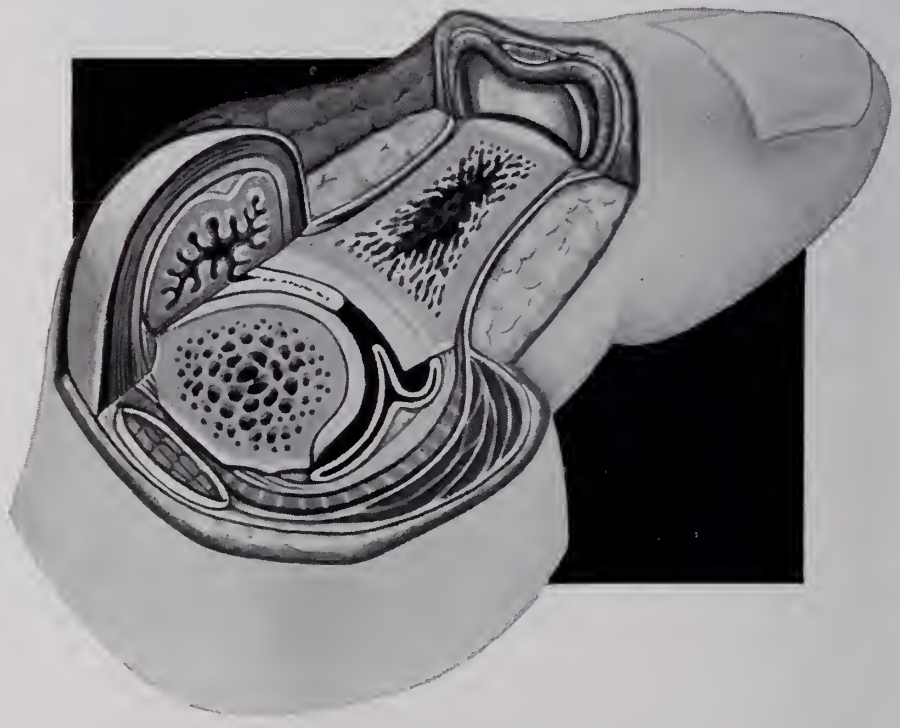

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WASHINGTON NEWS DIGEST

Washington, D. C.—A bill that is not a part of the official Eisenhower health program is causing a stir in Congress.

The bi-partisan measure would provide 90 million dollars to be spent over three years to help construct and equip non-federal medical research and laboratory facilities. Often in the past five years efforts have been made to get Congress to set up various huge new research programs pointed at one disease and calling for direct federal operation of the project. Without exception they have been turned down, Congress deciding that the existing National Institutes of Health are the proper vehicles for such all-federal research.

The bill that Congress now is interested in takes a different approach. It would have the federal government "get in and get out," a system used successfully in the Hill-Burton hospital construction program. Grants would go to nonprofit hospitals, medical schools, medical laboratories and like institutions, and the institution itself would have to match the federal money. Once the particular construction had been completed and equipped, the federal government would relinquish all control or influence over the project, as under Hill-Burton. Unlike the Hill-Burton plan, the grants would go directly from the U. S. to the project.

The Senate sponsors of this bill carry more than ordinary weight within their own parties. They are Senator Lister C. Hill (D., Ala.), who not only is a chairman of the Labor and Public Welfare Committee, but also heads the subcommittee that passes on most health appropriations, and Senator Styles Bridges (R.,N.H.). The latter has added prestige as chairman of the Senate Republican Policy Committee. The House sponsor is Rep. Percy Priest (D., Tenn.), chairman of the Interstate and Foreign Commerce Committee, which like Senator Hill's committee is in charge of most health bills.

Introduction of specific bills to implement the President's own health program disclosed a few more details of what he wants from Congress, but generally the suggestions are the same Mr. Eisenhower offered in his State of the Union Message, his Health Message and other earlier statements.

The reinsurance bill, again the center of controversy, is much the same as last year's bill, but singles out certain areas where the administration believes reinsurance would be particularly helpful. They are the coverage of rural families, greater protection for low income families (including home and office calls), and the insurance of major medical costs. The new bill also makes some technical changes designed to assure that the federal government does not intend to regulate the insurance industry.

The bill for federal guarantee of private mortgages on health facilities follows the general lines of last year's Kaiser-Wolverton plan, but makes some concessions. For example, the new bill drops the requirements that a facility has to devote most of its services to prepayment plan patients.

As introduced, the Defense Department's bill for more medical care for military dependents had no surprises at all. It is exactly the same bill offered last year. Efforts had been made to write in some compromises, but these were given up for the time being. The major question, as it has been from the start, is whether most dependents are to get their medical care from an insurance plan such as is proposed for other U. S. employees and their dependents, or are to be cared for by uniformed physicians in military hospitals.

Other parts of the President's program, now up for action in Congress, propose more money for the medical care of public assistance recipients, grants to states for training practical nurses and for more advanced nurse training, and more research and training in mental health.

A surprise Eisenhower request is that this country lift its statutory restriction on the amount of money U. S. may contribute toward the World Health Organization. Under present law the U. S. may not pay more than $3 million annually. The administration wants this ceiling lifted to $5 million.

Congress currently is deciding how much money to allow for health programs for the next fiscal year, starting July 1. Although the administration requested for Mrs. Hobby's department only about what it is spending this year ($2 billion), the budget for Public Health Service was upped about $77 million. Most of the research institutes are scheduled for substantial increases.

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*MARTIN H. BOLDT, M.D.

Louisville

Pheochromocytomas are tumors of chromaffin tissue which usually are located in the region of the adrenal glands. In about fifteen per cent of reported cases, however, the tumors occurred in other locations along the aorta. In almost one fifth of all cases they were multiple and about half of these were bilateral. Between five and ten per cent are malignant. Arterial hypertension is almost invariable at some time during the course of the disease, and may be either paroxysmal or sustained, but contrary to common belief is usually sustained. When this occurs it is often indistinguishable, on clinical grounds alone, from essential or malignant hypertension. Interest in these tumors has in recent years been accentuated by the development of newer techniques for their identification and of better means for their management. Surgical extirpation of the tumor usually results in complete cure.

The characteristic and at times dramatic disturbances caused by these tumors are explained by their endocrine function. It has been fairly conclusively demonstrated that these symptoms are due to the elaboration of pressor substances, the catecholamines; e.g. norepinephrine and epinephrine, which are infused into the circulation from the tumor. Infrequently symptoms of hypoadrenocorticism have been produced by the compression of normal adrenal tissues by these tumors.

The incidence of pheochromocytoma has not been established with any degree of certainty. Smithwick found five cases by palpation of the suprarenal areas in the course of performing splanchnicectomy for hypertension in one thousand consecutive cases, an incidence of 0.5 per cent. Graham found eight cases, an incidence of 0.47 per cent, in a similar group of 1700 hypertensives subjected to surgical sympathectomy. Gibbs found a probable incidence of 0.33 per cent in applying Benzodioxane as a routine screening agent to 300 consecutive patients with hypertension. Pheochromocytomas occur with about equal frequency in both sexes. The youngest case reported was a child five months old and the oldest was in an individual 72 years of age. More than half of the reported cases were first recognized at postmortem examination.

Case Report

Mrs. M.C., a 31 year old married woman, a patient of Dr. Stanley Smith, was first seen on November 30, 1950, complaining of recurrent attacks of headache and palpitation of two years duration. These episodes usually began quite abruptly with a feeling of uncertainty and trembling. Within one minute of onset she experienced a severe generalized pounding headache and palpitation. She would then become warm all over, though others had noted that her face would appear blanched. The headache would persist for periods up to five or six minutes and the palpitation for ten or fifteen minutes. At times great anxiety and fear of impending death were associated with these attacks, apparently because of the severity of the headache and the forcefulness of the palpitation. With subsidence of these episodes she would be in a moderately profuse sweat. Initially these attacks were of

Presented at the Regional Meeting of the American College of Physicians, Louisville, Kentucky, October 10, 1953.

*Clinical Associate in Medicine, School of Medicine, University of Louisville.

*Associate, American College of Physicians.

infrequent occurrence. In the three months preceding the initial examination they recurred with increasing frequency, up to five times a week. A few attacks appear to have been precipitated by emotional upheavals. Several other episodes occurred during sexual intercourse. Most of the spells, however, began with no apparent precipitating circumstance. On August 11, 1949, the patient delivered a normal infant after an uncomplicated and uneventful pregnancy and labor. This was prior to her first episode and her blood pressure is said then to have been normal.

Physical examination revealed a well developed and well nourished adult female of sthenic habitus and a rather swarthy complexion. Blood pressure was 160 millimetres of mercury systolic and 108 millimetres diastolic; pulse varied from 108 to 120; temperature was 99.8 degrees Fahrenheit orally. Retinoscopy revealed definite Grade I and II arteriolar changes. The heart was rapid and the sounds were overactive. P2 was louder than A2. The lower pole of the right kidney could be felt and was not tender. Heavy palpation and massage in the upper quadrants of the abdomen were uneventful. The peripheral arterial pulsations were full and forceful. The deep tendon reflexes were hyperactive. The rest of the physical examination was essentially negative.

The significant laboratory studies included a fasting blood sugar of 203 milligrams per cent and a basal metabolism of plus 31 per cent. A film of the abdomen with reference to the urinary tract revealed a downward and outward displacement of the upper pole of the right kidney.

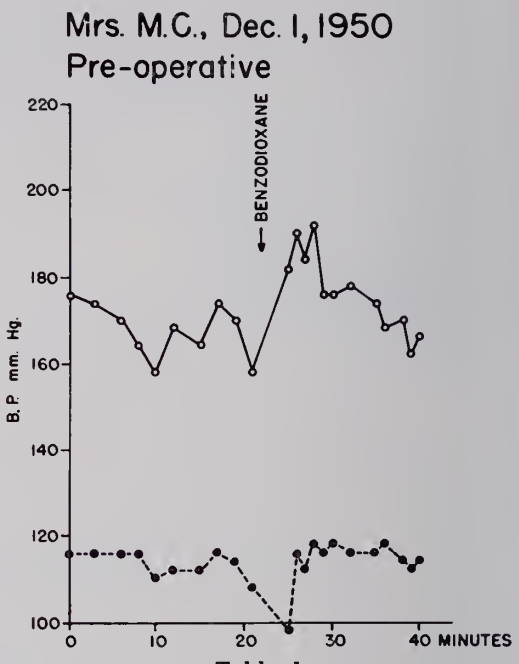
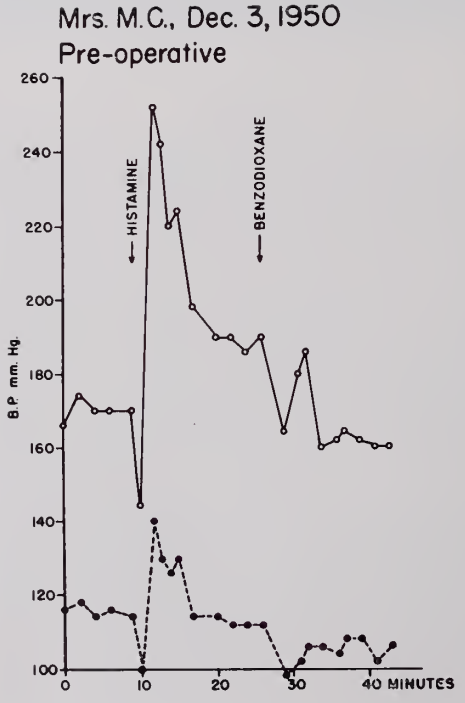


Table 1



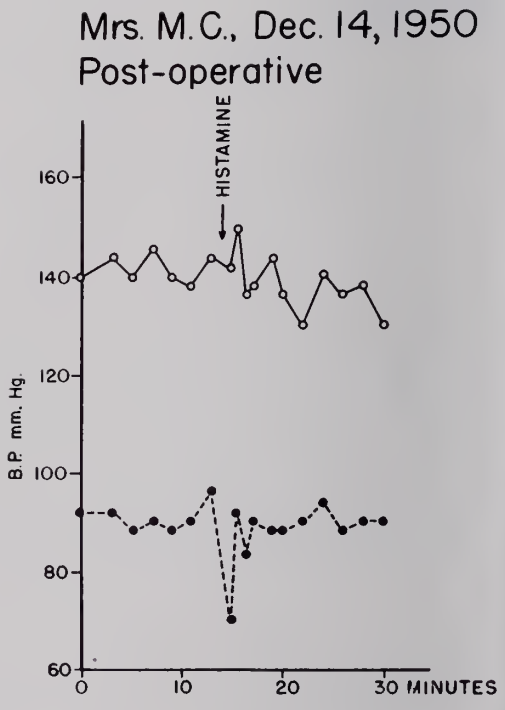


Table 2

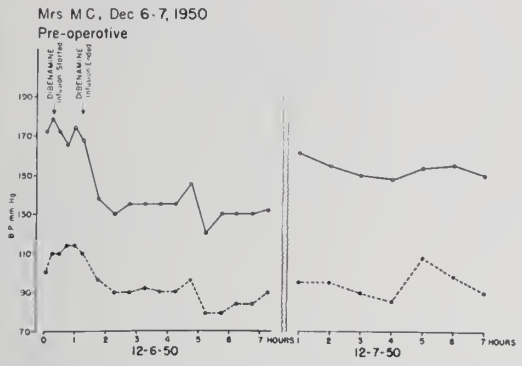


Table 3

An intravenous urogram demonstrated a right suprarenal mass. The results of a Benzodioxane test, a histamine test and a Dibenamine test are shown in Tables I, II and III.

On December 8, 1950, a right suprarenal tumor-mass was excised by Dr. A. B. Ortner. This measured 7 x 5 x 5 centimetres and weighed 147.8 grams. The tumor contained chromaffin tissue and histologically was shown to be a pheochromocytoma. During the early part of the operation the patient's blood pressure varied from 200 to 225 millimetres of mercury systolic. After exposing the tumor the patient was given 16 milligrams of Benzodioxane intravenously, then the pedicle was clamped. There was an immediate drop in blood pressure to 110 millimetres of mercury systolic and 70 millimetres diastolic with maintenance of this pressure through the remainder of the surgery. The post-operative course was uneventful with normotensive blood pressures at all times. The patient has been well and free from all symptoms since surgery. Her blood pressure has remained within the normal range and when last checked on September 3, 1952, was 112 millimetres of mercury systolic and 80 millimetres diastolic. Her eye grounds are now entirely normal.

Discussion

The sudden onset of palpitation, trembling, tachycardia, pounding headache, blanching of the skin and sweating that this patient exhibited during her attacks are characteristic of the "adrenal-sympathetic syndrome" and is caused by an outpouring of epinephrine and nor-epinephrine from the tumor into the circulation. When, as in this case, evidence for hypermetabolism and hyperglycemia is present, and the tumor is demonstrated in the suprarenal area, the diagnosis is quite apparent. More often, however, the clinical picture is not classical and the simpler laboratory procedures such as a basal metabolism, and the level of the blood sugar are inconclusive. Pre-operative demonstration of a mass above the kidney by means of x-ray has been reported in relatively few patients in whom the diagnosis of pheochromocytoma was subsequently demonstrated at surgery. In some instances these tumors have been quite small, and as has been previously stated, in about fifteen per cent of reported cases the tumors were located in the extra-adrenal areas. Perirenal air-insufflation has been successfully utilized as an additional roentgenological technique to demonstrate suprarenal masses; however, this procedure is not without danger from air-embolism.

There are a number of pharmacological tests available for clinical use in distinguishing patients with hypertension due to pheochromocytoma from other patients with elevated blood pressure. Various agents are available for this purpose. In general, these may be divided into two groups—those such as histamine, Tetra-ethyl-ammonium-bromide, and mecholyl which provoke a hypertensive response; and Benzodioxane, Regitine, Dibenamine and its congeners SKF 501 and 688 which are useful by virtue of their ability to block the effects of epinephrine and nor-epinephrine. The mechanism of action of these agents is not known. Histamine, tetra-ethyl-ammonium-bromide, and mecholyl probably act directly on the adrenal medulla and tumor tissue, causing a release of catecholamines. Histamine has been used in the diagnosis of pheochromocytoma since it was first reported by Kvale in 1945 and is more commonly employed for this purpose than either TEAB or mecholyl. The incidence of false positive and false negative reactions is appreciable with all these agents, but is probably less with histamine. The side reactions to mecholyl are at times frightening so that this agent has had less application than the others mentioned.

Benzodioxane, Regitine and Dibenamine and its congeners act by blocking the effect of epinephrine and nor-epinephrine. Dibenamine, SKF 501 and SKF 688 in recommended doses effect a rather complete and prolonged blockade of the sympathetic nervous system. This is manifested by normotensive and indeed hypotensive blood pressures which persist for upwards of 24 hours. In addition the pressor action

of epinephrine is frequently reversed so that the intravenous administration of this substance to an individual blocked by these pharmacological agents results in a further fall in blood pressure, the so-called reversal phenomenon.

The incidence of false negative reactions to Benzodioxane has been in part explained by the use of these agents during the non-humoral phase of the disease and in those patients with persistent hypertension, false negative tests may result from the development of secondary mechanisms for the maintenance of the hypertensive state. The false positive responses to Benzodioxane are said to be associated usually with nitrogen retention.

Of the adrenolytic agents Benzodioxane has been the most widely used. The variety and incidence of undesirable and at times severe side reactions has been sufficiently frequent to cause some alarm. In general the severe and serious reactions have occurred in patients suffering with essential hypertension. In these patients pressor responses are not unusual, and there have been several reports of encephalopathic phenomena being precipitated by its use. Benzodioxane is related chemically to the pressor amines, and it is believed that these alarming side reactions are due to the residual sympathomimetic activity of this substance. In patients with pheochromocytoma there may be an initial rise in blood pressure following the intravenous administration of Benzodioxane which is followed within two minutes by a marked drop in both systolic and diastolic blood pressure. This hypotensive response persists for periods up to twenty minutes.

Regitine has been more recently introduced and its adrenolytic action is very similar to Benzodioxane. At present it is receiving widespread usage in an effort to determine whether the incidence of unpleasant, alarming and dangerous reactions is less than that observed with Benzodioxane.

Dibenamine and its congeners are not recommended as diagnostic agents in patients suspected of having a pheochromocytoma. The incidence of hypotensive responses to the administration of these pharmacologic agents in patients with hypertension has been reported as being upwards of 50 per cent. Certainly this is too high an incidence for pheochromocytoma. The incidence and severity of unpleasant side reactions such as nasal congestion and dryness of mucous membranes is considerable. Furthermore, these side reactions are apt to persist for many hours and with Dibenamine hallucinatory states have been observed.

Because of the appreciable incidence of false positive and false negative reactions repeated tests and tests with different agents are recommended in doubtful cases. We use the provocative test agent histamine in cases which give a paroxysmal history of symptoms and in whom the blood pressure between attacks is in the normotensive range. An adrenolytic agent such as Benzodioxane or Regitine is always at hand for emergency use should a positive response to histamine prove embarrassing to the patient's cardiac status. We use either Regitine or Benzodioxane in those patients who have persistent hypertension.

The adrenolytic agents have also been used for the medical management of patients with pheochromocytoma prior to surgery. E. V. Allen reported the case of a patient with pheochromocytoma who was in chronic congestive failure which did not respond to the usual therapeutic measures but which did respond when the hypertension was relieved by the administration of SKF 688 at intervals during the day. It is in this circumstance that the longer acting agents, Dibenamine and its congeners find their usefulness. Their administration should be discontinued at least twenty four hours prior to surgery so that in the event of a hypotensive crisis during or after surgery the patient will be responsive to the administration of pressor amines.

The danger of marked pressor responses during surgery is emphasized by the several case reports of pulmonary edema and death at such times. Here the usefulness of the quicker acting adrenolytic agents, Benzodioxane and Regitine, has been amply demonstrated. The degree of sympathetic blockade with these agents is incomplete and hypotensive reactions can be overcome by the use of pressor substances such as Neosynephrine and norepinephrine. Grimson has reported that Pitressin intravenously in 0.5 to 1.0 cc doses is effective in counter-acting more complete sympatho-adrenal blockade. However, this agent is unphysiological and causes coronary as well as peripheral vaso-constriction.

More recently there have been a number of reports of in-vitro tests for pheochromocytoma. Patients with pheochromocytoma excrete excessive amounts of

epinephrine and/or nor-epinephrine in their urine when determined on twenty-four hour samples. The catechol content of urine can be determined by bio-assay and by chemical analysis. To date these tests have had rather limited application because of their involved and time consuming nature, but probably will be more used as the techniques for their determination in urine are simplified.*

Space does not permit a fuller discussion of the differential diagnosis, the pathology, and the pharmacologic and physiologic aspects. Nor does it permit the discussion of the management of these patients in the pre- and post-operative periods and during surgery, and of the technical problems for the surgeon.

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Fluid Replacement Therapy in Surgical Procedures*

FRED M. WILLIAMS, M.D.

Louisville

When considering the parenteral fluid requirements of the surgical patient, one often accepts the traditional policies in determining the amounts and kinds of fluid without due regard to actual needs. Too often, also, attention is given to the operative and immediate post-operative periods, and scant time is spent in preparing the patient for surgery. Such an error in management is one of the most glaring with which we have to deal. As a result, too many patients reach the operating room with an imbalance of water and electrolytes, malnutrition, or low blood and plasma volumes. The course during and after surgery is often stormy, and more intensive therapy is required than would have been necessary had adequate care been taken.

Although there are many laboratory examinations which are of value, they can never replace a careful history and physical examination. Laboratory examinations are expensive, not always readily available, and may even be misleading. One inquires about the types of fluid loss, e.g., sweating, vomiting, diarrhea, but it is of the utmost importance that an estimate be made of the *amount* lost. As an example, it is stated that one liter of gastric secretion contains about 16.5 milliequivalents of potassium, so that if the vomitus were fluid and gastric in origin, the physician could readily know approximately how much potassium need be replaced to

*Read at the Kentucky State Medical Association's Annual Meeting, September 22, 1954, before the Kentucky Society of Anesthesiologists Group Meeting.

cover losses from this source. Although this amount is small in comparison to total body potassium, continued losses would be serious.

Obviously, one must also take account of the chloride and water loss from fever, sweating, and high environmental temperatures. Nor can the insensible losses be ignored in the preparation of a patient. These losses may have to be replaced at the rate of 1000-3000 c.c. of water per 24 hours, 30-70 mEq of chlorides, 40-90 mEq of sodium, 1-3 mEq of potassium, depending upon the conditions as they exist.

Decrease in blood volume and plasma protein in the aged, with increase of extracellular fluid and loss of weight may be likened to a state of chronic shock. These people have very low reserves. It is important in estimating the balance of these patients to determine whether they have mental confusion, changes in the breathing pattern, lowered nutritional intake, recent weight loss, and obvious impending or actual acute shock states.

The physical examination can reveal much, and extensive laboratory procedures must not be substituted for evaluation of the patient's status, although such procedures can be useful when correlated with the physical findings. A few of these tests will be mentioned, since one should use all methods available in evaluating the surgical risk. Such tests can only add to the clinical judgment, not substitute for the evaluation by the clinician.

Urinalysis, with the concentration tests, pH, and quantitative chloride determinations is done, as well as the blood counts, sedimentation rates, hematocrit, and body weight determinations. Blood urea nitrogen, non protein nitrogen, serum determinations of sodium and potassium, vital capacity, electrocardiographs, blood pH, carbon dioxide combining power, plasma protein, plasma volume, calcium and phosphate determinations in serum and urine, and serum cholesterol determinations are among the many additional tests which may be ordered when evaluating each patient. No tests should be performed unless it is judged that definite benefit in knowledge will be gained. One must appreciate that no single laboratory procedure will give a reliable estimate of the deficiency one must overcome.

Planning the Therapy

Because the body fluids require electroneutrality, and because there must be an equality of the sum of the anions and the sum of the cations, such equilibrium may be better expressed as milliequivalents per liter of water or of solution instead of the usual volumes per cent, mgm/c.c., or Gm./c.c. The formula for determining milliequivalents is as follows:

$$mEq = \frac{(\text{mgm per 100 cc.}) \times 10}{\text{Atomic weight}} \times \text{valence}$$

A table of anions and cations in normal plasma and their approximate concentrations in mEq/liter is given below:

Anions		*Cations*	
K	5	Cl	103
Mg	2	HCO3	26
Ca	5	HPO4	2
Na	138	SO4	1
		Organic ac.	2
		Protein	16

The Preoperative Period

One must carefully tabulate the losses sustained so that adequate time and energy may be directed toward treating the deficits. Losses through gastric secretions are chiefly chlorides and potassium, jejunal and duodenal losses are about equal for anions and cations, while ileal and colonic losses are chiefly in loss of cations, or basic losses.

It behooves the physician to familiarize himself with the changes which occur in the shifting of the electrolytes and water from intracellular to extracellular spaces, and vice versa. When water and electrolytes are immobilized from traumatic shock, such a condition cannot be differentiated from the type of shock incurred when there is actual loss from the body. In all shock, burns, exposure to cold, and tissue anoxia, there is a rise in serum potassium and a gain in intracellular sodium, and with normally functioning kidneys that potassium is soon excreted. In shock it must be understood that there is a possibility of intracellular potassium deficit even though there is a rise in the serum levels.

Losses from urine, sweating, hyperpnea, etc. must be accounted for, and it is stated that under ordinary circumstances the urinary loss alone may require 1500 cc. of replacement fluid and 50-60 mEq of chloride per 24 hours.

If the parenteral routes must be utilized, any deficits in calories, electrolytes, or blood may be met by the administration of glucose, whole blood, protein hydrolysates, vitamins, albumin, alcohol, etc., although if there is time and the possibility, no parenteral route can take the place of oral administration. Why have we forgot-

ten, in all therapy, that the patient has a mouth? Often the patient may not be permitted to utilize fully his processes of ingestion because of an overzealous clinician.

If negative water balance is the chief condition, such a solution as 5% dextrose in distilled water is chosen, or isotonic saline in sodium and chloride deficiencies. In the case of need for more sodium than chlorides, 1/6 molar sodium lactate solution is then of choice.

Administration of potassium requires more careful thought, since there is some danger of hyperpotassemia and cardiac complications. There is as yet no true method of measuring actual deficits, but it is stated that the daily requirements will be from 50-100 mEq, and the average diet will supply these needs. Potassium therapy in the state of lowered renal function and decompensation can be very dangerous, and perhaps it would be wiser to wait until the restoration of more adequate function. Many cases in the postoperative period that demonstrate abdominal distention, asthenia, lassitude, and even paralytic ileus and peripheral edema may have potassium deficits, and hypochloremia and a rise in the carbon dioxide combining power may show in the laboratory tests. The potassium salt which may be used most frequently is potassium chloride, which has 13.4 mEq of potassium in each gram of KCl.

One must also recall that hyperadrenocortical function causes a decrease in potassium, both in the serum and in the intracellular spaces, and there is associated hypochloremia and metabolic alkalosis. Eliel, Pearson, and Rawson propose that trauma produces a release of endogenous ACTH and consequent stimulation of the adrenal cortex. This theory might explain the hypochloremia and metabolic alkalosis which may develop in the postoperative period in the face of obviously negligible losses which would not alone explain the depletion. The need for potassium therapy increases as the magnitude of the surgery becomes greater.

Potassium dosage such as 80-100 mEq/24 hours for severe prolonged operations, down to 50 mEq for operations like herniorrhaphies may be considered adequate. Administration in the presence of oliguria or extreme dehydration should be cautious or withheld, as mentioned previously and here re-emphasized. Oliguria in the immediate postoperative period is the rule, the degree depending upon the magnitude of the surgical procedure.

Therapy in the Operative Period

Fluids for replacement or maintenance must be given during this period, and of these perhaps the most important is blood and substitutes, the latter better classed as volume expanders. Blood is of more efficacy if given as it is being lost.

Because of the rise in popularity of blood banks the availability of whole blood has increased in the last few years. As a result, there has also been an increased tendency to use blood indiscriminately and often unnecessarily.

To know what is the correct amount of blood to be replaced is important, particularly in the poor risk patient, where too much or too little would task their reserves or safety margins.

For years there have been various ideas and methods proposed for measuring and determining blood loss. Among these were hematocrit readings, hemoglobin levels, and plasma protein. However, it was found that these readings were not accurate enough or were misleading in giving the proper information. Blood volume studies have been made from time to time, but these laboratory procedures are not always readily available to all or cannot be performed rapidly enough for the clinician who must be providing blood at the time of loss.

Gatch and Little were among the first to report measurement of blood loss, using colorimetric methods, and many others have modified or described this method.

Baronofsky, Treloar, and Wangensteen described a gravimetric method, and as early as 1942 such procedure was accepted as being the most accurate and best way to obtain the tabulation of blood loss during surgery. If saline is used on the sponges and packs, this also is taken into account in the calculation.

Tables of average blood loss for various operations have appeared from time to time in the literature, but these are without much meaning, since losses will vary widely according to the techniques of various surgeons and the status of the individual patients.

Thus, weighing the sponges and packs and measuring the aspirated blood is the most efficacious way of obtaining immediate information. If scales are not available, it has often been assumed that each 4" x 4" sponge, after use, will have about 8-10 cc. of blood, and estimations can be

made from this data. Comparative checks using this method and the gravimetric method show favorable comparison. When pure guess-work is employed, there is a universal tendency of the surgical team to under-estimate the loss. It also is well to remember that the amount removed from the wound may not represent all that is lost to the circulating volume, and that blood lost to the subcutaneous tissue, etc., in the postoperative period does not lend itself to accurate calculation.

The Postoperative Period

Probably the most common error during the first 24 hours or so postoperatively is the indiscriminate use of sodium chloride and water. Since oliguria is the rule, there is rather marked retention of the electrolyte. The oliguria and its severity is more related to the severity of the surgery and not to the volume of fluid given.

Probably the best fluid to give during this immediate period is 5% dextrose in distilled water. Hypotonic saline has also been advocated as it gives chlorides in small amounts and the water that is required. Amino acid solutions will provide additional calories and a sparing of body stores of proteins. In emphasis, it is necessary to realize that it takes twice as much protein by the parenteral route as it does when utilized orally. If the patient can take fluids and food by mouth, by all means, give them that way as soon as possible. To return the patient to homeostasis, no parenteral method has been invented which will equal the normal, physiologic, oral feedings. Modern techniques and drug therapy in anesthesia have minimized the tendency of postoperative nausea and vomiting, and it is commendable that oral therapy can be started earlier in most instances than formerly possible.

With shock and evident circulatory disturbance, one may give isotonic saline along with blood, or, if the latter is not available, plasma, serum albumin, or expanders such as Dextran are of benefit and should be used. Isotonic sodium lactate or saline may be used in acidosis, or 2% ammonium chloride in 500 cc. of distilled water is useful in metabolic alkalosis.

It is a sad state, indeed, that we as anesthesiologists often are so busy that we see the patient for the first time in the operating room, discovering too late that a deficiency cannot be adequately corrected in the allotted time, and that the attending surgeon requests that we proceed with the anesthesia on an ill-prepared patient. In such a case, it would be well to discuss the urgency of the procedure with the surgeon and battle for the time required to fill the patient's needs if it is possible.

Awareness that there is no set of rules which will apply to all patients, and that each person must be individualized in fluid replacement therapy, will save many troublesome hours for the clinician. With the advance of the pharmaceutical houses in preparing proper sterile, pyrogen-free, easily administered solutions which we may have for parenteral therapy, there is hardly an excuse for us as physicians to fail to recognize the ordinary needs of the patient and to administer accordingly. The evils of having "routine therapy" are many. Let us strive to be clinicians, not automatons.

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Digitalis Therapy and Digitalis Intoxication*

RALPH M. DENHAM, M.D.

Louisville

Digitalis is one of the most widely used and at times most abused drugs in cardiac therapy. When used properly it is our most valuable agent in the management of congestive heart failure. It is also helpful in the therapy of many cardiac arrhythmias. When used improperly or when actually contraindicated it may cause serious intoxication, cardiac arrhythmias and even death.

With the increasing use of digitalis glycosides the incidence of digitalis intoxication is rising. Any physician may prescribe digitalis or may have referred to him a patient who has received an uncertain amount of this drug. Many of the symptoms and signs of congestive heart failure and of digitalis intoxication overlap. It is also true that one of the manifestations of digitalis intoxication is increasing congestive heart failure. One must often decide whether these findings are due to under-digitalization or to over-digitalization. Therefore, it becomes necessary for the physician to know the unusual as well as the usual effects of this drug.

Indications for Digitalis Therapy

Congestive heart failure, regardless of its etiology, is the primary indication for digitalis therapy. The digitalis preparations are the only known agents which act directly on the heart muscle to improve its efficiency and restore compensation. Other measures are supplementary.

Although there may be no objective signs of left ventricular failure other than a gallop rhythm, digitalis is usually effective in symptomatic left ventricular failure.

Some therapists are reluctant to digitalize a patient who has developed congestive heart failure as a complication of acute myocardial infarction. However, recent reviews and our own experience indicate a more favorable prognosis if digitalization is accomplished.

A trial of digitalis therapy is probably warranted in all cases of congestive heart failure but it will not always be effective. In some instances of tight mitral stenosis or aortic stenosis it proves to be ineffective. With acute rheumatic carditis with heart failure it may be of little benefit. If "high output" failure due to hyperthyroidism, anemia, arterio-venous fistula or beriberi is present, there may be no improvement with digitalization.

Contraindications to Digitalis Therapy

The only absolute contraindication to digitalis is the presence of digitalis intoxication or the presence of full digitalization. As we have mentioned, some hesitate to use digitalis during the acute stage of myocardial infarction. Ventricular tachycardia is generally regarded as a contraindication to the drug but there are those who advocate the use of digitalis as a treatment of ventricular tachycardia.

Controversial Uses of Digitalis

Digitalis is often used when it will do no good and may actually do harm. A "fast heart", that is sinus tachycardia, is no indication for the drug unless the tachycardia is due to congestive heart failure. Sinus tachycardia is commonly present in anxiety states, febrile states, neurocirculatory asthenia and sometimes from some unrecognized cause. Digitalis is ineffective in such cases and should not be used simply because the heart rate is increased.

Puffiness of the ankles or actual edema is not helped by digitalis unless it is definitely related to cardiac failure. Insufficient inquiry into the cause of the edema commonly leads to digitalization in patients with edema from other causes.

A practice which we have encountered is the use of "tonic" doses of digitalis in people complaining of weakness or fatigue. These patients are often told that they have a "tired heart". Careful evaluation reveals no evidence of cardio-vascular illness and this use of digitalis is to be discouraged as it is totally lacking in therapeutic value.

Often in the pre-operative preparation of an elderly patient, digitalis is given. However, unless there is a specific indication from the cardio-vascular findings, this procedure is of no benefit and if digitalis intoxication results, great harm is done.

*Presented at Joint Meeting 12th and 15th Councilor Districts of Kentucky, State Medical Association, July 15, 1954.

Digitalis Preparations

A multitude of digitalis preparations are now available for clinical use. Most of these are of value when used wisely. Each preparation has its proponents and some offer advantages over others for specific purposes.

Certain observations have suggested that one glycoside may offer advantage over another in the management of specific arrhythmias. Other observers favor one preparation over another for the management of hypertensive heart disease or rheumatic heart disease with heart failure. There is no general confirmation that any particular glycoside has an advantage over another in these situations.

If rapid digitalization is to be done by the oral route, digitoxin is preferred to whole leaf preparations. For slow digitalization, whole leaf preparations may be used. If rapid intravenous digitalization is indicated lanatoside C, digoxin and gitalin are effective. Ouabain has been recommended for rapid intravenous digitalization. To avoid confusion and have a plan for sensibly digitalizing the patient, it is wise to become familiar with two or three oral preparations and one parenteral preparation for emergency use.

Digitoxin

Marriott[1] points out that we are in the "digitoxin era" and that with many physicians "digitoxin has become a habit". The simplicity of accomplishing digitalization by the simple directions required with digitoxin appeals to the busy practitioner. Gold and his co-workers[2] stated that the average digitalizing dose of digitoxin was 1.2 mgm. given in a single dose. They also suggested that 0.2 mgm. of digitoxin was the best maintenance dose. Since this dose by no means applies to all patients many have been under-digitalized and many over-digitalized by this set program which many physicians follow. Subsequent observers have found that in many instances this digitalizing dose is too small and this maintenance dose is too large.

Certain advantages have been ascribed to digitoxin but Marriott[1] and others have suggested that these advantages may actually work as disadvantages. Complete absorption from the gastrointestinal tract is one advantage but this is true of other glycosides. Lack of gastrointestinal irritability in comparison to whole leaf preparations avoids nausea, vomiting and diarrhea. This may also be undesirable as serious arrhythmias have developed without gastrointestinal disturbance in patients over-digitalized with digitoxin. This is also true of other glycosides. Gastrointestinal reactions may prevent such disturbance if whole leaf digitalis is used since it may not be possible to ingest more digitalis in the presence of these reactions. Prolonged action is helpful in maintaining a smooth effect if the patient is on the proper dose of digitoxin but if toxicity develops it will last longer than with shorter acting preparations. In our practice we frequently use digitoxin as a matter of convenience for initial digitalization but have abandoned it as a maintenance preparation.

Digitalis Leaf

The whole leaf preparations are used chiefly for maintenance therapy. If there is no urgency in accomplishing full digitalization, fractional doses may be prescribed over a period of several days. Any single dose must not be too large because gastrointestinal symptoms are likely to follow.

Digoxin

Digoxin is another glycoside derived from digitalis lanata. It is rather rapidly excreted. This is an advantage if therapy is pushed to the point of toxicity to obtain full digitalization. However, it may be difficult to establish a proper maintenance dose because of its rapid excretion.

Gitalin

This glycoside was isolated from digitalis purpurea in 1912. It had obtained little clinical use until the past three years when it has received wide clinical consideration. The work of Batterman and co-workers[3] has done much to increase its use. They suggest that gitalin is "the preparation of choice in the treatment of the patient with congestive heart failure". The chief advantage offered by gitalin is its wider therapeutic ratio as found by Batterman and co-workers.[7] The therapeutic ratio is the per cent of the toxic dose required to produce adequate digitalis effect. For most preparations, nearly two-thirds of the toxic dose is required to produce this effect, but with gitalin only slightly more than one-third of the toxic dose is required. (Table No. 1.)

In digitalization and maintenance therapy there is a wider margin of safety with this glycoside. Furthermore, in advanced heart disease in which the therapeutic

range becomes more narrow, gitalin may be useful when other preparations have failed because of toxicity. Recent work by Dimitroff and co-workers[4] has confirmed this observation.

Gitalin is uniform in its potency and absorption. Its rate of dissipation falls between the rapidly excreted digoxin and the slow dissipation rate of digitoxin. Thus, maintenance dosage is readily established and should toxicity appear it should not persist too long.

Lanatoside C

This glycoside has its chief use in parenteral therapy. When given orally only about ten per cent of the drug is absorbed. Consequently, large doses of the drug must be given and maintenance is difficult to establish. However, when given parenterally the drug acts rapidly and full digitalization can be accomplished in a few hours. The drug may be given either intravenously or intramuscularly. It is particularly valuable for rapid digitalization in the management of acute congestive heart failure and paroxysmal tachycardia. This drug also has a rapid dissipation rate and if maintenance therapy is to be carried out relatively large doses are necessary.

It is obvious from the above discussion and perhaps from the reader's experience that any of these preparations can produce satisfactory digitalization in most patients. The maintenance dosage may also be regulated satisfactorily if it is done on the basis of each individual and not on a routine for the "average patient". If digitalis intoxication develops, it will last longer with digitoxin than with other preparations and therefore this is "potentially the most dangerous preparation" according to DeGraff[5]. It should be remembered that none of these preparations is free of the danger of intoxication if too much of the drug is given either for digitalization or maintenance therapy.

Table 1*

Therapeutic Ratio

(Percent of Toxic Dose Required To Digitalize)

Digitalis Leaf	66.5%
Digitoxin	58.0%
Digoxin	60.6%
Gitalin (amorphous)	36.9%

*Adapted from Batterman, DeGraff and Rose (7).

Digitalization

Each individual requiring digitalization will need an unknown amount of the specific preparation to accomplish this. That preparation should be selected which will meet the particular needs of the case depending on the urgency of the situation, indication, state of the myocardium, and whether the patient is already partially digitalized. Approximate range of dosage for oral digitalization and maintenance is given in Table No. 2.

For rapid digitalization by the intravenous route we prefer lanatoside C. This is a pure glycoside readily available commercially as Cedilanid. It is supplied in ampules containing 0.4 mgms. and 0.8 mgms. of the drug. The usual digitalizing dose is 1.6 - 2.0 mgms. If no digitalis has been given for two weeks, 1.6 mgms. can be safely given initially in acute left ventricular failure and 0.2 - 0.4 mgms. repeated every four hours until the desired effect is obtained. In less urgent situations 0.8 mgms. may be the initial dose followed by 0.4 mgms. every four hours until full digitalization is accomplished. If the patient has had digitalis recently and more effect is desirable, the intravenous route should be avoided and this preparation may be used intramuscularly in fractional doses. If the oral route cannot be used because of nausea, vomiting, gastric suction or recent surgery lanatoside C in doses of 0.2 - 0.4 mgms. intramuscularly daily will maintain satisfactory effect.

Lanatoside C has a rather rapid dissipation rate and consequently its effect is of short duration. We prefer to switch to one of the oral preparations mentioned above for maintenance therapy if it is necessary following the use of lanatoside C.

Table 2

Digitalis Preparations - Dosage

Preparation for oral use	*Digitalizing dose*	*Average daily Maintenance dose*	*Duration of action (days)*
Digitalis Leaf	1.0 - 2.0 grams	0.1 grams	14 - 21
Digitoxin	1.0 - 2.2 mgm.	0.1 mgm.	14 - 21
Gitalin	5.0 - 6.5 mgm.	0.5 mgm.	4 - 8
Digoxin	2.5 - 8.0 mgm.	0.5 mgm.	2 - 6

Digitalis Intoxication

The incidence of digitalis intoxication is rising. Many attribute this to the increased use of digitoxin. Lown and Levine[6] believe it is due to the change in the management of congestive heart failure.

The most common manifestations of digitalis intoxication are gastrointestinal disturbances and cardiac arrhythmia. Other reactions include yellow vision, scotomata, mental confusion (especially in elderly patients), neuralgia and increasing congestive heart failure.

Gastrointestinal symptoms are more common when whole leaf preparations are used than with the use of the glycosides. Gastrointestinal reactions include anorexia, nausea, vomiting and occasionally diarrhea. Anorexia is usually the earliest manifestation, preceding the other disturbances by from one to several days. The same gastrointestinal upsets may be produced by congestive heart failure alone. At times these gastrointestinal upsets act as protective phenomena as the patient cannot continue to ingest the drug in the presence of these symptoms. With the purified glycosides serious arrhythmias due to digitalis intoxication may develop with no gastrointestinal disturbance.

Cardiac arrhythmias due to digitalis overdosage indicate a serious outlook and must be sought and promptly treated as soon as recognized. All varieties of cardiac arrhythmia have been attributed to digitalis. These include manifestations of ventricular irritability, disturbances in conduction, disturbances in sinus rhythm and sino-auricular conduction, auricular fibrillation and flutter and supraventricular tachycardia. Many of these same arrhythmias when not due to digitalis intoxication, are actually stopped or improved by digitalization of the patient.

One must at times decide whether arrhythmia is due to digitalis overdosage or whether the arrhythmia may be improved by digitalization. In general, the more bizarre the picture of ventricular irritability or of unusual conduction defect, the more likely it is that digitalis poisoning is the cause of the disturbance.

The more serious effects of digitalis intoxication are the arrhythmias and increasing congestive heart failure. Other disturbances usually recede promptly with withdrawal of the drug.

The increasing frequency of digitalis intoxication has been credited to the widespread use of digitoxin. That is not to say that digitoxin alone will produce these manifestations of toxicity because any digitalis preparation may cause digitalis poisoning. The apparent reason for digitoxin causing an increased incidence of intoxication is the routine use of 0.2 mgms. of the drug as the maintenance dose. Intoxication may insidiously develop in patients who have been on this maintenance dose for a period of several weeks or months. Since digitoxin rarely produces gastrointestinal irritation, serious cardiac arrhythmia may develop as the initial manifestation of toxicity. Once toxicity develops, the prolonged action of the drug makes the symptoms persist longer.

Marriott[1] recently reviewed several reports of digitoxin—induced arrhythmias in which the arrhythmia appeared before other symptoms. In their recent review on digitalis therapy Lown and Levine[6] cited 66 instances of paroxysmal auricular tachycardia with block. In 12 of these digitalis was not a factor. These 66 instances occurred over an eleven year period but over half of them occurred in the preceding three years. They thought the increasing incidence was due to the method of electrolyte and diuretic manipulation of the patient rather than to digitalis alone. Potassium loss with diuretic management may favor the development of this arrhythmia and other manifestations of digitalis intoxication.

Can the Incidence of Intoxication Be Diminished or Avoided?

If full digitalization is accomplished in each case treated, a high incidence of intoxication of minor degree is likely to occur. In advanced heart failure the margin of safety between therapy and intoxication becomes very narrow and toxic symptoms occur frequently in these patients. Careless observation or treatment of a patient as an "average" case and placing him on a maintenance dose of any preparation without proper follow-up observation and adjustment is likely to result in intoxication. Vigorous diuresis of a patient only slightly over-digitalized may result in full blown toxicity with serious arrhythmia or even a fatal cardiac arrhythmia.

Evidence has been cited that gitalin may offer a wider margin of safety both for digitalization and maintenance than other preparations. In advanced heart failure where the margin is narrow this is of particular importance. If maintenance therapy cannot be controlled by frequent

observation, gitalin again would offer a safety factor. "Postmercurial redigitalization" as described by Lown and Levine[6] can be avoided by withholding mercurial and other diuretics when there is any suspicion that the patient is over-digitalized. If symptoms are suspicious especially if there are occasional premature contractions then the diuretic should be stopped.

Thus by using care in the selection of the preparation, watching maintenance therapy attentively, avoiding vigorous diuresis and observing for the earliest sign of cardiac arrhythmia (especially in patients with advanced heart disease), we may diminish the frequency of digitalis intoxication.

Treatment of Digitalis Intoxication

Milder degrees of digitalis intoxication improve by simple withdrawal of the drug. This improvement may require from one to three days depending upon the preparation used and its rate of dissipation. In the more severe degrees of toxicity symptoms of overdosage may persist for several days and occasionally for as long as two weeks. Some toxic arrhythmias have lasted for several weeks after withdrawal of the drug.

In the more severe states of intoxication, especially with tachycardia or other arrhythmias, the drug must be stopped but other measures are also indicated. No diuretic should be administered because of the accompanying diuresis of potassium which in turn enhances digitalis effect[6]. The administration of potassium salts either parenterally or orally is suggested by Lown and Levine[6] in severe toxic states. Potassium chloride usually is tolerated orally in dosage of 1.0 gram three or four times daily. Potassium chloride may be given intravenously in doses of 20 milliequivalents (1.5 grams) per 500cc of 5% glucose. There is little danger of hyperkalemia when this therapy is used in the toxic arrhythmias. The potassium salts seem to be particularly effective in the atrial arrhythmias due to digitalis overdosage[6]. It may be necessary to give the potassium in repeated doses over a period of several days although many patients show improvement within a few hours after its administration.

Quinidine or Pronestyl may be effective in the ventricular arrhythmias. Some investigators suggest that Pronestyl is more likely to be of benefit in these toxic arrhythmias. Quinidine sulphate may be given orally in doses of 0.2 grams every four hours. Quinidine hydrochloride may be given intramuscularly 0.6 grams every six hours if the oral route cannot be used. Pronestyl is probably more effective if administered intramuscularly in a dose of 0.5 grams every four to six hours. We do not believe that either quinidine or Pronestyl should be given intravenously in these seriously ill patients.

Atropine sulphate may be helpful if the vagal effects of digitalis seem to predominate.

Careful attention to fluid intake is essential during severe intoxication. We think it wise to encourage the patient to take two or three liters of fluid daily by mouth if possible.

Discussion of Clinical Problems

The following case reports emphasize many of the factors which we have discussed above.

CASE 1. R. N. A 74 year old woman with hypertensive heart disease insidiously developed shortness of breath, tachycardia, and edema over a period of several months. Four weeks before the patient was first seen she had been digitalized with digitoxin and then placed on a maintenance dose of 0.15 mgms. daily. When seen for office consultation, anorexia was the only subjective symptom. Her weight was 99 pounds. The blood pressure was 210/130. There was evidence of left ventricular enlargement. Heart failure was manifested by moist rales at the lung bases, a gallop rhythm and two plus pitting edema of the legs. The heart rate was 100. The rhythm was regular. Casual examination of the electrocardiogram in the standard leads suggested sinus tachycardia but closer inspection in lead V one revealed a paroxysmal auricular tachy-

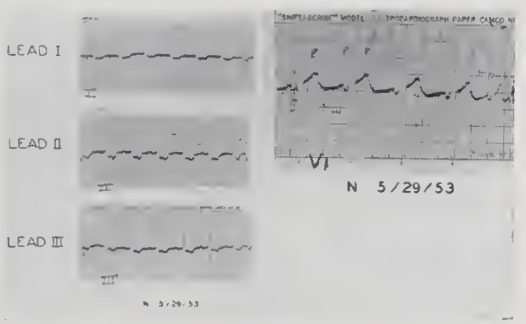

Figure 1

R. N. - Paroxysmal auricular tachycardia with 2:1 Block due to digitalis intoxication. P waves are difficult to identify in the Standard leads but the true mechanism is readily seen in V 1 where the P waves are prominent.

cardia with the auricular rate 200 and the ventricular rate 100. (Figure 1.) There was also evidence of digitalis effect. The left ventricular leads suggested left ventricular hypertrophy.

Digitalis therapy was discontinued. The referring physician admitted the patient to the hospital twelve days later and the patient expired 7 days after admission. The electrocardiogram made the day of admission revealed a paroxysmal nodal tachycardia with a ventricular rate of 148. She was given quinidine hydrochloride, 0.3 grams intramuscularly every six hours and twenty-four hours after admission the rate was 72 and the rhythm regular. The NPN at that time was 112 mgms. per cent and rose to 150 mgms. the day she abruptly died.

Comment: The presence of persistent tachycardia led this patient to be overdigitalized in an effort to slow the heart. Without the help of the electrocardiogram which revealed this arrhythmia which is present with digitalis intoxication, we might have prescribed more digitalis. This patient undoubtedly had advanced heart disease and again emphasizes the narrow margin between a therapeutic and toxic dose of digitalis in these patients. It also emphasizes the rather poor prognosis which one may assume with the appearance of this arrhythmia.

Case 2. B. S. A 61 year old woman with rheumatic heart disease with both mitral and aortic stenosis and insufficiency, for two years had had bouts of paroxysmal tachycardia which occurred very frequently. Quinidine sulfate did not control the bouts. She was digitalized eighteen months previously and this resulted in good control of the arrhythmia. The maintenance dose of digitalis leaf was 0.08 grams. She took this dose only five days of the week. She was hospitalized because of complaints of abdominal fullness, anorexia, nausea and vomiting following diuresis. There was no objective evidence of congestive heart failure at the time of admission but the cardiac apical rhythm was grossly irregular and the apical heart rate was 65 per minute. The electrocardiogram on admission revealed paroxysmal auricular tachycardia with block. The auricular rate was 250. The ventricular rate was 68. There was also evidence of considerable digitalis effect. (Figure 2.) Subsequent electrocardiograms at short intervals revealed auricular fibrillation and less evidence of digitalis effect. This patient was managed by withdrawal of digitalis and administration of quinidine orally. Since discharge from the hospital ten months ago she has been maintained on gitalin (Gitaligin 0.5 mgm) one tablet six days of the week. She has tolerated this well and has had no toxic symptoms whatsoever. The auricular fibrillation has persisted and the ventricular rate has been well controlled, the rate averaging 70 per minute.

Comment: We may see from this illustration that digitoxin alone is not responsible for all intoxication. This patient developed intoxication on a whole leaf preparation with only minimal gastrointestinal symptoms but developed a severe arrhythmia indicating digitalis intoxication following diuresis. The insidious nature of intoxication on maintenance digitalis is again emphasized. It is possible that the auricular tachycardia with block was a transition phase in this patient's heart disease as she had had a regular rhythm with no tachycardia on several observations during the preceding year. The persistent auricular fibrillation since the paroxysmal auricular tachycardia is suggestive that the arrhythmia may have been due to progress in her disease rather than to digitalis alone. However, there has been no further deterioration of the patient as far as cardiac compensation is concerned in spite of the persistent auricular fibrillation. The auricular rate is somewhat faster than the usual auricular tachycardia which is accompanied by heart block. (Figure 2.)

Case 3. F. A. A 50 year old woman with a history of a known heart murmur for

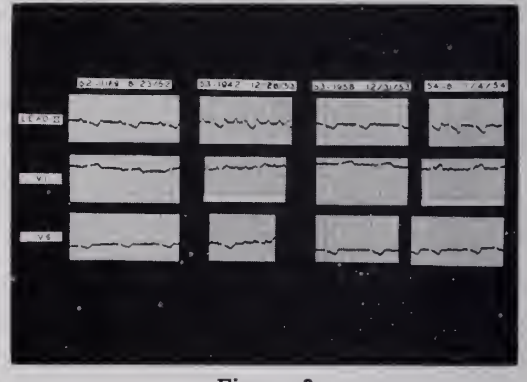

Figure 2

B. S. - Sinus rhythm present 8-23-52. Paroxysmal auricular tachycardia with variable ventricular response present on 12-28-52. (Auricular rate 250, Ventricular rate 68). Subsequent tracings show auricular fibrillation. Note difference in configuration of the P waves.

twenty years. She had had a thyroidectomy for toxic goiter twenty years previously. Her history suggested cardiac decompensation for the preceding 6 months. There was a loud harsh systolic apical murmur but no diastolic murmur could be heard. There was a gross left ventricular enlargement. Auricular fibrillation was present and the ventricular rate was 140. At the time of admission the patient had a large pleural effusion on the left. The liver was enlarged and tender. There was slight edema. The patient gave a history of not being able to tolerate digitalis leaf nor digitoxin both of which had been tried recently. She was digitalized and then placed on a maintenance dose of gitalin (Gitaligin 0.5 mgms.) daily. Within twenty-four hours the apical rate had dropped to 88 and the patient improved gradually. The pleural effusion recurred very slowly. The patient was discharged from our care and was next seen 10 weeks later. She had again stopped taking gitalin not because of intolerance but because of a physician's advice. She had been treated with a thoracentesis on the left each week for the preceding eight weeks. The patient again was redigitalized with gitalin and placed on a program of sodium restriction and diuretic therapy. During the past twenty months it has been necessary to have thoracentesis performed only four times. The patient has been much more comfortable and the heart rate has remained well controlled, with the apical rate varying from 68 to 88 on numerous observations, while receiving gitalin (Gitaligin 0.5 mgms.) one tablet five days of each week.

Comment: This patient illustrates that gitalin is better tolerated in advanced heart disease than are other preparations. Other measures to control the congestive heart failure have been of considerable help but without the digitalis effect we doubt that much progress could have been made in this patient. She has shown no intolerance for the drug on any occasion during this period of several months of follow-up.

Case 4. L. W. A 66 year old woman with known hypertension for 15 years with symptoms of congestive heart failure, chiefly left ventricular, for one and one-half years and a history of a cerebral vascular accident three years previously. When first seen, the patient was dyspneic on the slightest exertion. The blood pressure range was 230-250/130-140. No moist rales were heard and chest fluoroscopy revealed only slight pulmonary congestion. There was marked left ventricular enlargement by chest fluoroscopy and the electrocardiogram revealed incomplete left bundle-branch-block. Rhythm was grossly irregular and the heart rate was 70 at the apex. The patient was placed on a salt-free diet, a rauwolfia and veratrum preparation and digitalis leaf, 0.1 gram daily. She was advised to follow-up with her referring physician regarding her medication which had been prescribed for her heart and the medication suggested for the elevated blood pressure. She did not follow this advice, in that she failed to see her doctor. She continued to take the medication and when next seen four months later, she had been admitted to the hospital under the care of a surgeon because of possible acute abdomen. She had severe nausea, vomiting, scotomata and gross congestive heart failure with moist rales at each lung base, a markedly enlarged and tender liver and 3 plus edema of the legs. An oral mercurial diuretic had been given the day before onset. The cardiac rhythm was irregular but quite slow, the apical rate being 40. It was evident that digitalis intoxication accounted for the gastrointestinal symptoms, the slow ventricular rate and the increasing congestive heart failure. Accordingly, digitalis was stopped. No mercurial or other diuretics were given. The patient was given 40 milliequivalents of potassium chloride intravenously. Twenty-four hours after this therapy, she appeared much better and was able to take oral nourishment and medications. She received potassium chloride, 1.0 grams three times daily by mouth for the next 10 days. Runs of bigeminal rhythm were observed occasionally due to ventricular premature contractions by electrocardiographic examination. She was discharged on the 8th day after admission and was free of any objective evidence of congestive heart failure. The ventricular rate was 60 and still irregular and she was eating well and feeling well.

When this patient was seen 8 weeks after discharge from the hospital, she was remarkably free of symptoms, having no evidence of congestive heart failure. The cardiac rhythm was irregular, rate 60. She was taking gitalin (Gitaligin 0.5 mgms.) one tablet every other day which we had advised her to start one week after discharge from the hospital.

Comment: This patient was critically ill when we saw her in the hospital but her symptoms subsided promptly and there was objective improvement once we

recognized digitalis intoxication and began rather vigorous therapy. This case particularly emphasizes that congestive heart failure may result from digitalis intoxication. The objective findings of congestive heart failure cleared entirely during this short hospital stay without the use of any mercurial diuretic or digitalis preparation.

Summary

1. Digitalis therapy in modern practice has been reviewed. The indications and contraindications are presented. The advantages and disadvantages of several preparations are discussed.

2. There is no "average" dose of any preparation that will digitalize or maintain every patient. Each patient must be managed on a trial and error basis by careful observation. Gitalin has a definite advantage in its wider margin of safety between the therapeutic and toxic dose. This makes it desirable as a preparation for use in advanced heart disease with congestive failure.

3. Digitalis intoxication is increasing in frequency. The causes of this increase are reviewed and recommendations for the prevention of the intoxication are made.

4. The treatment of digitalis intoxication is discussed with emphasis on newer concepts.

5. Illustrative clinical problems are presented and discussed. Two cases of paroxysmal auricular tachycardia with block due to digitalis intoxication are reported.

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The Tonsil and Adenoid Problem

ARTHUR L. JUERS, M.D.

Louisville

The earliest reference concerning surgery of the pharyngeal lymphoid tissue was recorded by the Asiatic Indians about 3000 years ago. They removed troublesome tonsils saying, "They are to be seized between the blades of a forcep and drawn forward, and with a semicircular knife the third of the swelled part is to be removed." Apparently this continued to be the general technic used when surgery was resorted to until about 50 years ago when complete tonsil enucleation was first advocated.

Indications for Surgery

Detailed indications for tonsillectomy and adenoidectomy are difficult to define because in each category there will always be borderline cases. Since embarking on a career as an Otolaryngologist 20 years ago, my concept of indications has changed relatively little because I have always been inclined to lean toward the conservative side. The advent of sulfa drugs and antibiotics has apparently not decreased the incidence of the need for T and A appreciably. Clinical reports by a number of authors indicate that a fair percentage of cases of tonsillitis and pharyngitis receives relatively little benefit from antibiotic and sulfa therapy. This is in all probability due to the fact that the basic infective agent in these cases is either a virus or a drug-resistant organism.

The indications for T and A which are generally agreed on can be briefly listed as follows:

1. Repeated attacks of tonsillitis.
2. Hypertrophy of the tonsil and (or) adenoid to the point of obstruction.
3. The presence of considerable purulent and caseous material which can be repeatedly expressed from the crypts. There is usually associated cervical adenopathy. In general, these children are lacking in vitality and appetite.
4. Repeated attacks of otitis media associated with adenoid hypertrophy. In very young children adenoidectomy only may be considered if there is relatively little indication to remove the

Department of Otolaryngology, University of Louisville. Presented before Louisville Pediatric Society September 27, 1954.

tonsils at the same time.

5. Tonsils are now infrequently considered to be a focus of infection unless there is local evidence of disease such as is listed under indication 1 or 3.
6. Chronic mucoid postnasal drainage rarely originates in the adenoid. In some instances a large adenoid may interfere with the movement of the mucous blanket into the pharynx and the resulting stagnation can become a site of secondary infection. In these cases, the obstructive symptoms are obvious and removal of the adenoid is indicated. However, if the postnasal drainage is mucoid and the adenoid mass is not large, the drainage may more likely be on the basis of an allergic or vasomotor rhinitis. The sinuses must also be studied in these cases.
7. In rheumatic fever the tonsils should in general be removed during a period of quiescence of the disease, as indicated by the temperature and sedimentation rate.

Relation to Allergy

A somewhat more controversial aspect of the problem is what to do with the lymphoid tissue of the child who has obvious respiratory allergy. If any of the previously outlined definite indications are present, then there should be no hesitancy in doing a T and A. However, every effort should be made to control the allergy after surgery, because failure to do so increases the probability of recurrence of lymphoid tissue and a continuation of respiratory symptoms. In these cases it is generally desirable to remove diseased lymphoid tissue first, because the allergy will then be more readily managed. Unless there is definite evidence of infection in the lymphoid tissue, it should not be removed with the hope of relieving symptoms which are purely allergic in etiology.

In instances in which there is recurrence of lymphoid tissue I am always suspicious of an underlying allergy even though no definite clinical allergy is apparent. The presence of excessive eosinophiles in nasal secretion is evidence indicating allergy. I have observed several cases with recurrent attacks of otitis media which were not helped by repeated adenoidectomies and radiation therapy, but were readily controlled by allergic management. If the recurrent adenoid mass is rather large, a readenoidectomy should be considered before allergic treatment is undertaken. However, I do not mean to imply that all such cases are easily solved by the allergic approach.

The mediocre results too frequently obtained in the medical management of cases of known clinical allergy are due in part to relying too greatly on skin tests for diagnosis and, furthermore, not individualizing cases when inhalant desensitization is indicated. Diagnostic skin tests for food sensitivities are of rather limited value. A carefully taken history and elimination procedures as described by Rinkel[1] are much more satisfactory. Inhalant desensitization has in the past been based largely on increasing the dosage to the point of producing considerable local reaction at the site of injection. While this method gave satisfactory results in many patients, there were others whose allergic symptoms became worse as the larger doses were given. This has been described as the build-up dosage method of desensitization.

In recent years Hansel[2] has described what he calls the optimal dosage method of desensitization. He advocates starting with a very dilute solution of the extract and gradually increasing the dosage until relief of symptoms is obtained. This dosage is then not exceeded. In many instances the interval between injections becomes longer until it is necessary to repeat the dose only when there is re-exposure to the offending inhalant. The best illustration of the effectiveness of the optimal dosage method of inhalant desensitization is the coseasonal treatment of pollinosis. Hansel has observed that if the optimal dose is exceeded, the nasal allergic symptoms will be aggravated instead of relieved. The immunological mechanism involved is still not fully understood.

There is still considerable difference of opinion concerning the existence of bacterial allergy. It is not uncommon for symptoms of nasal allergy to appear for the first time after an unquestioned infection. However, it still remains to be determined as to whether this represents a bacterial allergy, or whether a latent allergy to other factors has become manifest as a result of the upset of the allergic balance incidental to the stress of infection. The occasional improvement in an allergic process following bacterial desensitization might be a non-specific effect. Hansel has, in some instances, noted improvement in symptoms due to food allergy, after giving minute doses of staphylococcus toxoid. I believe that the use of extremely small doses of stock respiratory vaccine may

prove to be of benefit in some of the more obscure and obstinate problems of respiratory infections in which suspected allergy is not easily discovered and controlled.

The management of cases of marked physical allergy poses one of the most trying problems in pediatric otolaryngology. Unless one or more of the indications for T and A listed earlier are present, I do not believe that removal of the tonsils and adenoids is of much benefit for these children. While the repeated respiratory infections seemingly are related chiefly to environmental climatic and temperature changes, there frequently are other more basic allergic etiological factors — i. e., foods or inhalants—and the environmental changes merely add enough additional stress to upset the total allergic balance. The concept of clinical allergy becoming manifest only when the summation of allergic etiological factors exceeds a certain level is not new, but warrants being restated at this time. It is not uncommon for respiratory allergic symptoms to subside when only the inhalant factor is treated even though nothing is done for the food aspect of the problem. We cannot change the weather, but we can enable many of these patients to tolerate adverse weather changes by eliminating inhalant or food factors from the total picture. The liberal use of antihistamine therapy is particularly helpful along with whatever other more specific treatment is indicated for each episode of infection. Fortunately, most of these children gradually acquire increasing tolerance to their environment.

Radiation Therapy

Radiation therapy to pharyngeal lymphoid tissue has been used with varying degrees of enthusiasm for many years. With the development of the nasopharyngeal radium applicator there was an enthusiastic trend toward this type of treatment. However, a more critical evaluation of results obtained indicated that it was of very limited value. The present trend is to perform a more thorough surgical adenoidectomy. The final remnants of adenoid tissue are removed with a curette and specially devised biting forceps. Instead of the adenoidectomy being done with a few quick bites with an adenotome as the patient awakens from the anesthetic, the adenoidectomy is becoming deservedly a more important part of the T and A technic.

I use radiation therapy rather infrequently now, and when I do I prefer x-ray therapy to the radium applicator, because x-ray covers a wider area more effectively. I recommend radiation only in those instances in which rather diffuse follicular hyperplasia on the posterior pharyngeal wall is considered to be responsible for recurrent nasopharyngeal infections or when otitis media tends to recur after adequate adenoid surgery. As stated previously, allergy should always be considered in such cases. Radiation is carried out only when all more definite etiologically directed therapy has been exhausted.

Relation to Bulbar Polio

In the past several years a number of clinical studies have been reported concerning the relationship of the absence of tonsils to the development of bulbar polio. The statistics gathered indicate that there is a significantly higher proportion of bulbar involvement in the tonsillectomized group as compared to those who have not had a tonsillectomy. This relationship exists irrespective of the interval between tonsillectomy and polio.

While the statistics reported seem valid, there is one possible fallacy in the conclusions reached by the various clinical investigators. I believe that every pediatrician will agree that the child who has been subjected to tonsillectomy has, prior to surgery, been immunologically and biologically different from the non-tonsillectomized child as to susceptibility to infection in the upper respiratory or cephalic area. Consequently, the reaction of these two groups of individuals to polio might also be different as to the area of the central nervous system most likely to be involved. Whether the absence of tonsils per se increases the likelihood of bulbar polio, or whether patients subjected to tonsillectomy are, before surgery, inherently more susceptible to bulbar involvement still remains a question.

There is still no unanimity of opinion, or definite proof, as to whether the polio virus enters the nervous system via the bloodstream or enters more directly over neural pathways from the pharynx and other portions of the enteric tract. Hence, the concept that tonsillectomy removes a barrier to virus invasion may still be a hypothesis.

I am in accord with the present trend not to perform elective pharyngeal surgery during the polio season. However, if any of the previously listed indications for T and A are present, there should be no hesitance to do necessary surgery at other times of the year.

Discussion and Summary

Competent management of patients with pharyngeal lymphoid tissue infection necessitates a broad consideration of each individual's reaction to a diverse number of etiological factors. The interrelation of allergy and infection frequently poses a difficult therapeutic problem. What can or cannot be expected in the way of benefit from T and A should always be discussed with the patient (or parent) and any need for subsequent allergic management should be considered before surgery is done. The probable further problems which may confront the child with physical allergy should be anticipated. A careful evaluation of the history before surgery will usually provide a basis for prognosticating future events. When done under proper indication, the results obtained from tonsil and adenoid surgery are most gratifying.

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Kidneys, Fluids and Electrolytes

ROBERT LICH, JR., M.D.*

Louisville

In order that the management of fluid and electrolyte balance does not resolve itself into a catechismal exercise it is advisable to spend a few moments in reviewing the basic principles of renal physiology. The evidence of a functioning kidney is urine, but urine is merely a by-product and is not the reason for the existence of a kidney. It is the responsibility of the kidney to maintain the normal ionic composition, concentration, reaction and osmotic pressure of all body fluids. The importance of the kidneys is obvious.

Normal Kidney Function

Kidney function is contingent upon three fundamental factors: 1) an adequate renal blood flow, 2) unimpaired glomerular filtration and 3) normal tubular function.

The renal blood flow constitutes at least 1200 cc. per minute or approximately 25 per cent of the cardiac output. The functional unit of the kidney, the nephron, possesses a unique vascular circulation; i.e., the afferent vessel conducts the blood to the glomerular capillary bed and the distal or efferent arteriole enters a secondary peritubular capillary bed before terminating in the renal vein. Renal blood flow is governed by arteriolar vasodilatation or vasoconstriction which is independent of kidney innervation and is probably a manifestation of intra-arteriolar chemistry and pressure. These variations in arteriolar circulation occur in the presence of intrinsic renal disease as well as within the normal kidney. Exercise, orthostatic hypotension, simple dehydration, shock and Addison's disease are all examples of vasoconstriction[1] with diversion of the blood from the renal circulation while the vasodilatation associated with fever is the outstanding example in this group.[2]

Proper glomerulo-tubular balance is necessary for normal renal function. If the filtration fraction (the portion of renal plasma flow that is filtered through the glomerulus) is reduced by either decreased renal blood flow or glomerular disease the fluid available for tubular function is diminished. On the other hand, if the filtration fraction is normal and there is tubular dysfunction there will occur chemical abnormalities. Actually, whenever there are glomerular changes there are associated tubular abnormalities resulting in an abnormal electrolyte and non-electrolyte pattern as well as the fluid volume of the urine and body fluid.

It is apparent then, from the foregoing discussion, that to assume acceptable renal function on the basis of a 24 hour urine volume is fraught with hazard. Fundamentally, urine volume is dependent upon the ability of the tubules to reclaim water from the glomerular filtrate. If tubular function is deranged it is easy to see that irrespective of the urine volume it might well be of dangerouly abnormal composition. We must know not only the volume of urine output, but the fluid intake and

Presented at the McCracken County Medical Society at Paducah, Kentucky on January 27, 1954.

*Clinical Professor of Urology and Chief of the Section on Urology, Department of Surgery, University of Louisville School of Medicine.

the composition of the urine; i.e., urea, salt, etc. Knowing the urine volume, fluid intake and urea nitrogen of the blood we have an estimate of the renal status and additional specific tests may be considered if necessary.

The azotemia of renal insufficiency is due to a proportionately diminished filtration of the components of non-protein nitrogen. Urea, the end product of protein metabolism, is eliminated almost entirely by the kidney and is the most prominent portion of non-protein nitrogen so that it is retained promptly and prominently in glomerular dysfunction. The plasma urea is dependent not only on its rate of diffusion across the glomerular membrane, but also on protein metabolism and catabolism. Hence, clinically we must consider the patient's diet and such catabolic manifestations as fever whenever interpreting the significance of the urea nitrogen level in the plasma.

Water

Water is the vehicle in which the electrolytes and non-electrolytes are transported through both the glomerulus and tubular cells. The astounding ease of water passage and reabsorption through these membranes is apparent when we realize that 180 liters or 45 gallons per day filter through the glomerulus, but less than ½ gallon reaches the bladder. Water containing its solutes is absorbed primarily through the proximal tubule; of the 125 cc. of glomerular filtrate formed per minute 100 cc. is reabsorbed. In the distal tubule the water absorption is against the osmotic gradient and involves work on the part of the tubule cell which is influenced by the antidiuretic hormone of the posterior pituitary gland. The amount of water reabsorbed is dictated by the demands of body fluid and the tubular absorption forms either hypertonic or hypotonic urine according to the body requirements.

Solids

At least 35 grams of solids must be excreted in the urine each day and the normal kidney can accomplish this with 500 cc. of hypertonic urine. However, if the kidney is unable to excrete a hypertonic urine it will obviously be necessary to make available a greater quantity of urine to excrete the necessary solids.

Since the kidney is responsible for normal fluid, electrolyte and non-electrolyte balance, it is imperative that we establish its functional capacities in an effort to estimate its potential response to therapeutic effort. In the determination of renal status we are interested in two facts: 1) the renal function at the moment and 2) the potential function or renal reserve. A quantitative method for determining renal reserve has not as yet been developed and thus we must depend upon the less useful tests demonstrating renal function at any given moment. The most useful tests for kidney function may be divided into three main groups.

I. URINE TESTS
1. Urinalysis
2. Excretion tests: PSP, indigo-carmine, organic iodides such as are used in excretory pyelography
3. Concentration tests: Mosenthal, Fishberg, etc.

II. BLOOD TESTS
1. Non-protein nitrogen, urea, creatinine
2. Uric acid (this is the first of the non-protein nitrogen fraction to rise in eclampsia or preeclampsia)
3. Cholesterol (in nephrosis the hypercholesteremia disappears when the nephrotic state improves and when renal insufficiency occurs)
4. Sodium
5. Chloride
6. Potassium
7. CO_2 combining power or pH (the blood pH is more important than the carbon dioxide combining power for it is not uncommon to have a respiratory alkalosis superimposed on a renal acidosis)
8. Calcium and phosphorus (important in latent tetany or metabolic bone disease such as is seen in renal rickets or the Fanconi syndrome)

III. COMBINED BLOOD AND URINE TESTS

Under this heading come the various Clearance Tests

There is little question that the only logical method of reporting the blood chemistry values is as milliequivalents per liter rather than in milligrams per 100 cc. of blood because of the ease of calculating replacement therapy. Milligrams/-100 cc. can be converted to mEq./L. by the following formula:

$$\frac{\text{mg./100 cc. x 10}}{\text{atomic wt.}} \times \text{valence} = \text{mEq./L.}$$

Helmer and Kohlstaedt[4] have made available the following conversion table:

FACTORS FOR CONVERTING BLOOD CHEMISTRY VALUES

mg.% to mEq./L.

	Divide By	or Multiply By
Calcium	2	0.5
Chlorides (from Cl)	3.5	0.286
(from NaCl)	5.8	0.172
CO_2 combining power	2.22	
Magnesium	1.2	0.833
Phosphorus	1.7	0.58
Potassium	3.9	0.257
Protein		2.43
Sodium	2.3	0.435
Sulfur	1.6	0.625

The following formula may be used as an index for the amount of electrolyte necessary which must be individualized by such clinical factors as the general condition of the patient, initial hydration, symptoms, extraurinary losses, fever, etc.:

$$\text{mEq./L. needed} = \frac{\text{pt.'s wt. (kg.) x normal mEq./L. - pt.'s mEq./L.}}{5}$$

The Proper Use of Fluids

Normal Postoperative Course. In any such patient with a normal cardio-renal status the parenteral use of fluids should be limited to glucose and water with the minimum quantity being 2000 cc. per day. Normal saline should never be used without specific indication for salt replacement. The average surgical patient during the first twenty-four hours loses less than 3.0 grams of salt or less than a third of the salt contained in the usual liter of normal saline. The postoperative patient is particularly sensitive to salt and may experience a 26 per cent increase in the extracellular fluid compartment by the administration of 1500 cc. of 5 per cent glucose in saline.[5] Furthermore, Moyer[6] observed that in upper abdominal surgical procedures the incidence of pulmonary complications is higher in the aged when salt was infused than when salt was limited to specific indications. It is vitally important that all of us should be cognizant of these facts, and when the patient needs water he should have water and depend upon glucose to afford isotonicity.

Complicated Postoperative Course. If the postoperative period is complicated by fever, vomiting, the need for gastric suction, diarrhea, etc., the fluid administration should be adjusted to cover these electrolyte losses. The loss occasioned by vomiting or the volume of fluid obtained by continuous gastric suction should be replaced by an equal amount of normal saline in addition to the 2000 cc. of 5 per cent glucose which acts as the basic fluid requirement in the initially well hydrated patient without fever. Because there is a distinct potassium loss in the vomitus[7,8] it is well to add to the parenteral fluid potassium calculated upon the blood deficit or in lieu of such facilities, 50 mEq./L. on alternating days during diarrhea or the period of active vomiting. Potassium loss during diarrhea is significant as was shown by Govan and Darrow[9] in reducing the mortality rate of infants with diarrhea from 32 to 6 per cent by the use of potassium chloride along with sodium chloride, sodium lactate and dextrose. During episodes of fever the fluid intake should be maintained at the basic level of 2000 cc. per day plus at least 500 cc. per degree of fever. Also, if parenteral fluids are necessary for an extended period of time they must be fortified with vitamin B complex and ascorbic acid.

Hypernatremia. An increase in the plasma sodium level in the extracellular fluid may be induced by an excessive administration of salt. This causes the extracellular fluid to attract water and there follows edema. A similar condition may be created with the excessive use of sodium lactate or bicarbonate. If this condition continues, the extracellular water shifts to the relatively hypotonic cell, carrying with it sodium which may displace the intracellular potassium. This intracellular potassium shift may produce a fatal potassium poisoning either by hyper- or hypopotassemia, depending upon the amount of potassium excreted by the kidneys. The obvious therapeutic solution is to administer water in an effort to reduce the hypertonicity of the extracellular fluid so that the salt is carried to the kidneys for excretion. In the event that hypopotassemia exists it will be necessary to replace these ions.

Fluids in Disease States

Chronic Pyelonephritis. In patients with chronic nephritis and particularly pyelonephritis, who are without significant cardiac complications, much assistance can be offered by maintaining their urine excretion level in excess of 2500 cc. per day in conjunction with a low protein, alkaline ash diet.[10] The alkaline ash diet is used to relieve the kidneys of any additional metabolic load.

Sufficient fluids should be taken in order that the specific gravity of the urine be kept below its maximum concentration and the kidney not be taxed to its functional capacity. For example, if the kidney can not concentrate above 1.010 it is mandatory to make available at least 3000 to 3500 cc. of fluid per day as the basic requirement and such additions as are necessary to compensate for other fluid losses from profuse sweating, fever, diarrhea, etc.

In the event of chronic, moderate, increasing azotemia it is useful to employ daily 1000 cc. intravenous infusions containing five or 10 per cent dextrose along with 200 - 300 cc. 1/6 molar sodium lactate.[10] These infusions given for three or four days should be repeated at 10 to 15 day intervals. This procedure is often spectacular in reducing azotemia.

The blood chloride and serum carbon dioxide combining power should be recorded regularly to observe the development of acidosis or hypochloremia. However, hypochloremia due to acidosis must be differentiated from hypochloremia associated with pulmonary deficiency which is purely a chloride shift. To administer salt to this latter group may prove fatal.

Nephrotic Edema. This is the most troublesome symptom of renal disease, irrespective of its stage. The cause of edema is threefold: 1) sodium retention, 2) hypoalbuminemia and proteinuria and 3) cardiac failure. The renal damage usually permits sodium retention and thus sodium restriction is essential. The degree of sodium retention is such that it is necessary to reboil all vegetables in order to cast away the sodium in the initial cooking water. It is particularly important to avoid medications containing sodium and hormonal therapy because of its salt retaining properties. The diet should be acid ash, except in case of renal failure. Ammonium chloride may be even more effective than the acid ash diet by permitting the excretion of fixed base (sodium) with the acid residue. A high protein diet, which fundamentally is an acid ash diet, is useful for the following reasons: 1) the urea content acts as a diuretic, 2) increased potassium content and 3) replacement of protein loss. However, let it not be forgotten that in patients with renal failure a high protein diet is contraindicated because it creates an undesirable metabolic load on the kidney.

The value of markedly increased water intake must be realized and the basic fluid level maintained in excess of 2500 cc. daily. Amino acid therapy may be employed provided the salt content of the preparation is known. However, in instances of severe hypoalbuminemia the most useful preparation is salt free human albumin.

"Salt-losing" Nephritis. This term is applied to a group of patients whose renal failure is augmented by an excessive loss of salt. These patients lose salt through their kidneys in excess of water and develop severe dehydration and hypotension. The use of sodium chloride and sodium bicarbonate in a ratio of 2:1, employing 5 to 15 gm. per day, may prove lifesaving and maintain these patients for prolonged periods.[11]

Lower Nephron Nephrosis. The most common causes for this condition are chemical poisonings (carbon tetrachoride fumes, and sulfonamides), mismatched blood, prolonged periods of shock or hypotension, burns, congestive heart failure, urinary tract obstruction and toxemia of pregnancy.

The first step in treatment is the attempt to prevent the toxic condition or immediately re-establish the impaired renal circulation. When the state of oliguria or anuria occurs the treatment must consist in maintaining normal electrolyte balance. The normal water loss from the body must be replaced and none added; the daily fluid intake without fever or vomiting must not exceed 1000 cc. If the patient is not seen until several days following the onset of anuria and the patient has been treated with "enthusiastic forced diuresis", it is necessary to discontinue all fluids and permit the patient to "dry out". If there is vomiting, the volume of the vomitus must be accurately recorded and replaced with normal saline or hypertonic saline depending upon the hydration of the patient. It is during this stage that it appears to the family that the patient is receiving inadequate therapeutic assistance and the management of the family may often provide one with a more active therapeutic task than does the unfortunate patient.

A high carbohydrate diet must be maintained and the proteins avoided because of their nitrogen content. Orange juice and broths are to be avoided because of their high potassium content.[12]

In the event of acidosis, either 1/6 molar sodium lactate or five per cent sodium bicarbonate in 200 cc. amounts may be used. However, sodium bicarbonate adds

the anion, HCO_3.

Hyperpotassemia must be watched for, and if it becomes evident it may be combatted by a continuous gastric lavage. This is preferable to the use of cation exchange resins since the latter can easily lose the cations of Na+ and K+ and not reabsorb them in the intestinal tract when the PH is seven or higher.

The period of oliguria or anuria may continue for three to 14 days, during which time the tubules are undergoing healing and the patient's life depends upon the maintenance of physiological balance.

Following the period of anuria there occurs diuresis of either gradual or of explosive proportions. During this period the electrolyte pattern must be constantly observed to be aware of any precipitous change. It is especially important to watch the sodium chloride plasma level which may fall with such rapidity as to require 30 or more grams replacement during a 24 hour period. However, in instances of sulfonamide poisoning, instead of a marked sodium chloride loss during diuresis, it may be rapidly reabsorbed, attain great concentrations in the plasma and result in death through cerebral edema.[13] In other words, these patients must not be overtreated during the phase of anuria and undertreated during diuresis; a fatality results in either instance.

Summary

There is presented herein a consideration of renal dysfunction with relation to the fluid and electrolyte balance of the body. The attached bibliography will afford much to the reader in understanding these therapeutic concepts. However, it must be emphasized that each patient is much more an individual problem from the standpoint of electrolyte and fluid therapy than in perhaps any other phase of therapeutic medicine.

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Biopsy of The Breast*

JACOB M. MAYER, M.D.

Mayfield

With due respect to the other participants on the Biopsy Panel today, it is my opinion that the breast is the most important site as regards biopsy and surgical pathology to be discussed today.

Data published in our own Kentucky Vital Statistics Report reveals that for the past three years carcinoma of the breast heads the list for the cause of death from cancer in the female in the state of Kentucky (Table I).

TABLE I

Comparison of Deaths from Carcinoma - Most Frequent Sites - Female - Kentucky State Department of Health - 3 Years

Sites	1950	1951	1952	Total
Carcinoma of Stomach	148	141	148	437
Carcinoma of Intestines (except Rectum)	225	204	247	647
Carcinoma of Rectum	47	44	57	148
Carcinoma of Breast	225	239	276	770
Carcinoma of Cervix	114	166	167	447
Of other and unspecified parts of Uterus	160	147	133	440

Once we have realized the frequency of carcinoma of the breast, we have made our first step toward a better diagnosis. The diagnosis of carcinoma of the breast is a serious matter. Given a woman with a lump in the breast, a discharge from the nipple, a mass in the axilla, or a skin lesion of the areola, before one can rightly treat that patient and forever afterwards have a clear conscience, a correct diagnosis must be made. Does the patient have a benign or a malignant lesion? Or, in the words of the anxious and apprehensive patient, "Is It Cancer?" If it is malignant, radical surgery and/or irradiation will be the treatment; whereas if it is benign, conservative treatment with reassurance will suffice.

Years ago, before surgical pathology had come of age, our older surgeons had to rely entirely on their rich clinical experience and knowledge of gross pathology. It is acknowledged that in perhaps 85 per cent of the cases they were right; but in some they were wrong, and radical operations were honestly carried out for benign breast conditions. No longer is it necessary to rely entirely on the gross appearance of a lesion. The hardness of the lesion is not necessarily a criterion of malignancy, for many benign lesions of the breast may present a hard tumor with even dimpling of the skin that simulates carcinoma. A thin microscopic slice of the lesion in question, stained and studied by a doctor with not only knowledge of the end results of disease learned at the autopsy table, but also a rich background of clinical medicine bridging the gap between the onset of disease and death, gives us the report that guides us in our decision to be radical or conservative. The skilled surgical pathologist is a necessary partner on the breast surgery team.

Unfortunately, there is a shortage of skilled surgical pathologists, and their geographical distribution is another limiting factor. It is estimated that there are not over 14 pathologists in the entire state of Kentucky. The Directory of Medical Specialists, Vol. 6, lists only 12 certified pathologists in Kentucky. The same volume lists 66 certified general surgeons. The latest directory of the American College of Surgeons lists around 225 Fellows in Kentucky. Inasmuch as those few pathologists are located in six of the larger cities of the state, a great handicap is placed upon surgeons in the smaller places. By necessity, some of the larger towns are served by pathologists outside of Kentucky.

Surgeons today prefer not to do a mastectomy, neither simple nor radical for carcinoma except in the most clinically obvious cases, without first having a report of biopsy from a qualified pathologist. If the surgeon is fortunate enough to live in one of the larger places where frozen sections can be examined at the time of the operation, a definite diagnosis should be possible in 95 per cent of the frozen sections examined. If, on the other hand, he is not fortunate enough to live in a community where frozen sections can be done, all he can do is to perform a biopsy and, with a cooperating pathologist at not too great a distance from him, have a report in from two to four days. Fortunately, while it is ideal to be able to proceed immediately with the operation on the report of a "malignant neoplasm," there are few who will contend that the end result

*Read before the Kentucky State Medical Association, September 21, 1954, Columbia Auditorium, Louisville.

will be any worse, even if the waiting period extends up to ten days.

A few days, however, make a big difference to the patient. Due to education of the lay public by cancer organizations, some women have developed cancer phobia and an immediate frozen section report to them and their families approaches their ideal of "a test for cancer" that they have read so much about in the lay press. They do not know that even the best of pathologists cannot always make a diagnosis from a frozen section, particularly when the microscopic picture is confused by the presence of inflammation, well differentiated carcinoma, or a papillary lesion. The latter especially may cause great difficulty, even on paraffin section, in differentiating between a benign and malignant tumor. But woe unto the rural surgeon who performs a biopsy, mails it to a distant and at times unsympathetic pathologist, and sits and waits until the pathologist gets around to studying the paraffin section and mails him a report.

Present Surgical Trends

It might be pointed out at this time that there is a growing sentiment among certain surgeons, in view of the failure to improve the percentage of five-year cures over the past 50 years, that it may be necessary to look further and further from the breast for the outer limits of the disease. This is especially true in Stage II lesions in which the radical mastectomy of Halstead and even the "ultra-radical" operation of Haagensen have failed to give sufficiently effective results. In addition to biopsy of the breast lesion, they advocate that a biopsy of the homolateral internal mammary chain of nodes be done in all Stage II lesions or Stage I tumors located in the inner half of the breast. Some believe they will be able to improve the cure rate by then performing the "Super-radical" operation as proposed by Wangensteen. Another group, in view of a positive report, advises no more surgery save perhaps a simple mastectomy, and depends on irradiation for ultimate cure or palliation. In addition, hormones, oophorectomy, adrenalectomy, and hypophysectomy have been used in some cases.

This author had one patient who presented a mass in the axilla that proved to be carcinoma, metastatic from a breast that clinically showed no tumor. A few such cases of "hidden" or "occult" carcinomata of the breast have been reported by others. Hence, any enlarged lymph node in the axillary region should be subjected to early excision and biopsy, with the breast in mind as the probable site of the primary lesion.

Types of Biopsy

Biopsy may be defined as a procedure in which tissue for pathological diagnosis is secured with the implied purpose of guiding treatment. That biopsy is a must in the diagnosis and treatment of breast conditions is agreed by all. There is some difference of opinion as to the method that should be used. The three methods considered are: (1) aspiration or needle biopsy; (2) incisional biopsy; and (3) excisional biopsy. So far, cytological studies of breast secretions have not proved to be practical.

Aspiration biopsy is a procedure by which small cores or plugs of tissue may be obtained by inserting a hollow needle of some type across normal tissue into the tumor. Some operators use simple suction or aspiration, while others have devised various types of trochars with forked, beveled, or serrated cutting ends. Naturally, the amount of tissue is small; and there is always some question whether the tissue obtained came from the tumor within the breast or the breast tissue. (This procedure should not be confused with simple aspiration as used to determine if a mass is cystic or solid). Objections to the method are many. First, it gives cytologic rather than histologic evidence of carcinoma. In better differentiated carcinomata the arrangement of cells within ducts, as well as their invasive character, is just as important as the type of cell per se. Second, all of us have been taught to be gentle in our examination of a breast for fear our rough handling might disseminate cancer cells into lymphatics and veins. It seems to this author that plunging a large bore needle several times into a breast cancer is therefore contraindicated. Third, where cystic tumors are encountered and aspirated blindly, one can never be sure a small undetected carcinoma does not lie within or near the fluid-filled mass. Finally, as a result of cancer education previously referred to, women are coming earlier and earlier with smaller and smaller lumps in their breasts. The successful aspiration of a small lump is difficult and rarely achieved. Regardless of the apparent simplicity of the method, in dealing with a peripheral organ such as the breast, which is easily

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CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

Carcinoma of the Ovary

Dr. W. O. Johnson
Chairman of Department of Obstetrics and Gynecology

Cancer education, and cancer research and detection programs have been pursued diligently and large sums of money have been spent on them in recent years. Let us now consider one phase of this work, namely primary ovarian cancer. The following case report is typical of one particular type of this disease.

Dr. D. Groenig
Department of Obstetrics and Gynecology

This patient is a 68 year old colored Para 1 Gravida 2 Abortus 1 who noted no vaginal bleeding since cessation of menses 18 years ago. She was admitted to Louisville General Hospital 20 October 1954 with a two week history of dyspnea, orthopnea, productive cough, vague lower abdominal discomfort and swelling of the abdomen. The admission diagnosis was pleural effusion, right side.

The past history revealed the patient to be a diabetic controlled on 20 units of N.P.H. insulin daily. A left nephrectomy had been done in 1944 for hydronephrosis. An intra-venous pyelogram 23 September 1954 showed good function in the remaining kidney.

The physical examination showed the following: Temperature 98°, Pulse 100, Respiration 30, Blood Pressure 130/80.

The patient was in moderate respiratory distress preferring the sitting position. The right chest was dull to percussion except at the apex and breath sounds were absent. The left chest and heart were not remarkable. Liver, kidney and spleen were not palpable. Evidence of ascites existed. Abdominal and pelvic examinations revealed a movable non-tender mass in the right lower quadrant with a large underlying mass nearly filling the pelvis, extending to within two finger breadths of the umbilicus. This seemingly arose from the left adnexa. The uterine corpus and cervix were normal to palpation. No pedal edema was present.

X-Ray examination of the chest on 20 October 1954 revealed fluid filling the right chest except at the apex. (See Figure 1.) No abdominal mass was visualized on a kidney, ureter and bladder film. On 26 October 1954 a barium enema was interpreted as showing a diverticulosis of the colon and also a pelvic mass was noted.

On admission the Hemoglobin was 10.9 gms, white blood cells were 7,600, non-protein nitrogen 50 mgm%, fasting blood sugar 149 mgm%, urinalysis and Kahn negative. The smear and culture of the sputum and the pleural fluid were negative for acid fast organisms. The report on the pleural fluid withdrawn 21 October 1954 was positive for malignant cells unclassified as to type. Grossly the fluid was cloudy and blood tinged.

A clinical diagnosis of ovarian carcinoma with metastases to the right chest was made. It was the opinion of the Tumor Board that laparotomy should be performed.

On 1 November 1954 a laparotomy was performed. A 12 cm. semi-cystic mass on the left encircled by a large hematosalpinx

Figure 1

was encountered. The right tube seemed to be involved and the uterus was of normal size. The liver was studded with nodules, presumably metastatic. The adhesions were not dense and a bilateral salpingo-oophorectomy was accomplished. A diverticulum of the colon complicated by a metastatic growth was also removed. The patient's general condition was critical and no further surgery was done.

The pathological diagnosis was papillary adenocarcinoma of the left ovary with lymphatic permeation and hematosalpinx. (Figure 2.)

Figure 2

The immediate post-operative course was uneventful aside from moderate dyspnea.

The right hydrothorax persisted. On 10 November 1954, 75 millicuries of radioactive gold were instilled into the chest by the X-Ray Therapy Department.

On 18 November 1954 the patient was discharged to be followed in the tumor clinic. Moderate orthopnea persisted and X-Ray of the chest on 18 November 1954 revealed persistent marked opacification of the right chest.

At a clinic visit 30 December 1954 the patient had no cough or dyspnea but evidenced ascitic fluid in the abdomen and had dullness to percussion in the right chest.

Dr. W. O. Johnson

Chairman of Department of Obstetrics and Gynecology

A recent study of 9,404 admissions to two institutions* showed that 1% of all gynecological admissions had ovarian malignancies. 17.3% of all genital malignancies were ovarian in origin.

The predominant symptoms in benign tumors of the ovary were pain and bleeding. In the majority of the malignancies of the ovary, enlargement of the abdomen associated with pressure symptoms were the most common complaints. 50% of these malignant cases had symptoms of less than three months duration, yet few of them fell into the classification of early disease. 51% of this group were in the age group of forty to sixty years of age while 15% were under the age of forty.

Only 2% of the malignant tumors were less than six centimeters in size while 71% of the benign tumors were less than six centimeters.

The treatment for ovarian cancer should be surgery, if possible, and one should consider the bilateral salpingo-oophrectomy and total hysterectomy wherever possible. The removal of involved omentum is of questionable value.

Postoperative radiation has been a subject of much discussion. Two factors, namely the type of tumor and the clinical extent of the disease should be taken into consideration in determining its value as an adjunct to surgery.

Malignancies of the ovary are still one of the least curable cancers of the female genital tract. 50% of these patients will be dead within nine months and over 68% of the remaining will be dead in eighteen months. An over-all cure rate of about 20% can be accomplished.

Dr. A. J. Miller

Chairman of Department of Pathology

(Figure 3)

The tumor cells are arranged in large, solid masses and papillary forms with little connective tissue stroma. Cells are pleomorphic, many of them multinucleated, and a few have small vacuoles. Much of the growth is necrotic and hemorrhagic. The wall of the cyst is invaded and several small veins contain tumor thrombi. Malignancy is high grade and implantation on the peritoneum is probable.

Dr. E. L. Pirkey

Chairman of Department of Radiology

None of these roentgen findings are specific for any one disease. However, taken together with the patient's history and physical findings as presented, they are extremely suggestive of a gynecological tumor arising in the left half of the patient's pelvis, obstructing the left ureter and at the same time displacing the sig-

*Louisville General Hospital and Kentucky Baptist Hospital.

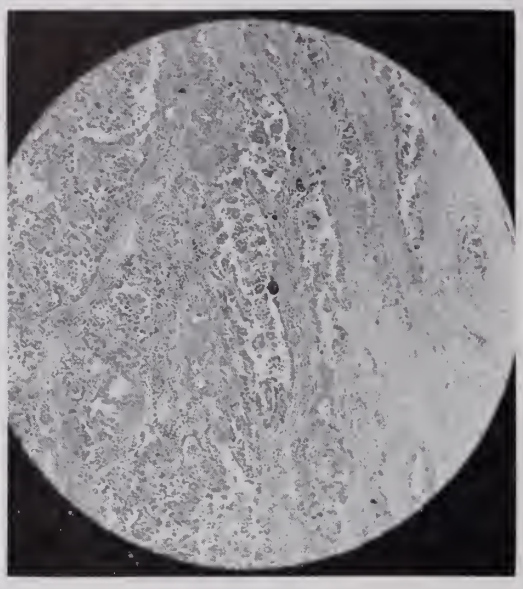


Figure 3

moid colon as noted above. The etiology of the effusion from the roentgenograms alone could be due to almost anything including trauma, infection, or tumor. However, when one considers the rest of the findings as outlined above, one would have to think very strongly of the possibility of this pleural effusion being associated with this pelvic mass and as noted, the pathologic findings on the pleural fluid bore this out.

This case is thought to be an excellent illustration of the information that radiographic examinations can give one who is familiar with the remainder of the clinical findings. No one of these roentgen changes is characteristic of a single disease, but when added to the other information, they help considerably in reaching the correct diagnosis.

Dr. J. T. Ling
Department of Radiology

If a serous cystadenocarcinoma or a pseudomucinous cystadenocarcinoma is not completely removed or is found beyond the ovary at the time of surgery, then postoperative irradiation is mandatory, for there seems to be little doubt that such irradiation prolongs life, gives definite palliation, and in some instances, is a deciding factor in cure.

Patients with inoperable ovarian carcinoma, involving the peritoneal surface or the pleural cavity often develop collections of fluid. Introduction of radioactive gold into a serous cavity is now advocated as a substitute for roentgen ray therapy to eliminate intractable fluid formation in the pleural and peritoneal cavities in carcinomatosis. The success attained appears to be related directly to the maintenance of strict criteria for selection of cases. Ideally, the patient selected for radiogold therapy should have no large masses of tumor in the cavity and no severe constitutional effects from the neoplasm, apart from the discomfort and disability occasioned by massive collections of fluid. If there is a bulky tumor mass, roentgen ray therapy should be directed locally to the tumor mass in addition to the radiogold therapy.

A large number of patients have been treated with radiogold since its first use by Muller, a Swiss investigator. Our own experience and the results reported by others appear to indicate that it is of definite palliative value in selected cases. Approximately fifty per cent of those cases treated may be benefited. It produces less radiation sickness than a course of conventional roentgen ray therapy. It is relatively simple to administer and the unfavorable reactions appear to be minimal.

Dr. W. O. Johnson
Chairman of Department of Obstetrics and Gynecology

This case presents the frequent example of a patient with an advanced carcinoma of the ovary who has been treated by different groups of men with a definitive diagnosis being made only months later by a thoracentesis and examination of the pleural fluid.

Any woman over forty who has pressure, distension and tenderness of the abdomen, and a low grade temperature should always be considered a possible candidate for primary carcinoma of the ovary, and a diligent search made for the cause of her symptoms.

SPECIAL ARTICLES

DOCTOR JOHN RICE COWAN *

DANIEL C. ELKIN, A.B., M.D.**

I am honored to participate in paying tribute to Dr. John Rice Cowan. Although a considerable bridge of age and location existed between us, our contacts were frequent and there existed a mutual interest in literary, historical, and professional matters, and on my part, a profound admiration for his character, his personal charm, and his ability as a doctor.

He was born in Danville in 1872, and received his preparatory education at Centre Academy, and his Bachelor of Arts degree from Centre College when he was 18. In 1894 he graduated from Harvard Medical School, a member of that famous class which gave Harvard three illustrious professors—Newell in obstetrics, Joslin in medicine, and Cushing in surgery. He spent two years as an intern at the Boston City Hospital, thus completing an education—or rather beginning one—far beyond the usual and customary demands of the day.

On one occasion he told me of "having some offers" to remain in Boston, but this was never seriously considered. Danville was his home. Here was his Alma Mater and here his family, whose progenitors had been among the first settlers of this state. To have gone elsewhere would have been by way of a sacrilege.

His life is well known to you. Recognized as an outstanding surgeon and a founding member of the American College of Surgeons, his fellow physicians of Kentucky made him their president in 1924.

He was patriotic in the extreme, and when he was nearly fifty he volunteered and served as a medical officer in World War I.

Aside from his profession and family, his main interests centered about his church and his college. In the one he was a senior warden and a member of the executive council of the Episcopal Diocese; in the other he became a trustee in 1916 and chairman of its board in 1934. To both he gave generously of his time, his wise counsel, and his worldly goods.

He died transcending the Biblical allotment by ten years and one. He died as he had lived — quietly, peacefully, still at work, and still in the full exercise of his faculties.

These are small words, soon forgotten, placed here, as it were, for the record:

"The sense of the world is short,
Long and various, the report. . ."

Dr. Cowan was a man set apart by his character and personality. Future generations of students and faculty who walk these halls will be more interested in *why* he was set apart, and will ask, "What manner of man was this?"

It is idle to speculate as to why some individuals with equal opportunities of heredity and environment achieve success and others fail. With Dr. Cowan there was certainly a strong hereditary influence plus the type of education that leads to achievement—achievement in his profession, integrity, and intellectual capacity.

Possessed of the advantages of a liberal arts education—of which this institution is so justly proud, he was steeped in the classics, in literature, in history, and in the science of society. The insight into his own life he transmitted to the lives of others, for he realized that science, particularly medical science, should not be the whole of a doctor's heart, mind, and soul.

He held certain and definite beliefs, subconsciously, I am sure.

He believed in the exhortation of St. Paul to the Philippians, "*Quaecumque sunt vera.*" Surely, "Whatsoever things are true" and "The truth shall make ye free" are Holy Writ. He believed Truth to be the only excuse for the existence of an institution of Christian education.

He believed and practiced those ideals and sentiments so boldly emblazoned on Centre's shield—*literae, religeo, scientia.*

There was yet another quality which we will long remember aside from integrity

(Continued on page 245)

*Delivered June 6, 1954, at the 131st Commencement of Centre College, on the occasion of the unveiling of the portrait of John Rice Cowan, A.B., M.D., Trustee of Centre College 1916-1953, and Chairman of the Board of Trustees 1934-1953.

**Professor of Surgery, Emory University

EDITORIALS

A SYMPOSIUM ON SERVICE

"Our County Medical Society has been more useful to our people from a public service point of view, thus enhancing its prestige, since the K.S.M.A. has been sponsoring the County Society Officers Conference," a recent past president of one county group commented.

To those men who plan the conference each year, statements like the above are encouraging. The specific purpose of the County Society Officers Conference, which will be held in Lexington, Thursday, April 7, is to bring to the County Medical Society leaders every possible help in resolving their local problems.

The Conference this year, the fifth, will present an extraordinary group of speakers, nationally recognized for their past accomplishments in effectively solving perplexing problems confronting the small or medium sized county medical society. A special feature of the 1955 program will be a discussion of medical legislation now facing Congress, by Kentucky's own Acting Majority Leader, Senator Earle Clements.

The official family of the K.S.M.A. warmly urges all county medical society officials and leaders to plan to attend this second most important meeting of the Association. Arrange to bring other physicians with you to this worthwhile session. You will find it one of the most interesting and profitable of the year.

WE CAN LIFT UP OUR HEAD

President Davidson, Medical School Dean Kinsman and the Trustees of the University of Louisville made, in our opinion, an important contribution to the Medical Welfare of our state in January 1955. They announced that, beginning this fall, 124 Freshman students will be admitted to the medical school each year. By dividing the classes into sections and securing additional instructors in the preclinical years it is believed the enlarged class may be carried as well as previously. It may even result in an elevation of the level of instruction.

That, without extension of present physical facilities, the Dean and medical faculty will attempt this increase is a magnificent service. It indicates a true devotion to the cause of medical education in general and more particularly a determination to do their part to meet the urgent needs of Kentucky. It is hoped that they feel the entire profession of the state supporting and endorsing their increased effort. Most physicians in the state are University of Louisville Medical Alumni and even those who are not have shown a surprising loyalty and moral support to our only medical school during the past few years.

Perhaps an increasing number of Kentuckians graduated in medicine yearly will not, as some contend, solve the problem of distribution—but it will help. Perhaps fewer than 124 natives of our state will present satisfactory scholastic qualifications and a desire to study medicine each year—but the quota can easily be filled from elsewhere. It has been years since any recruitment of promising High School Students was attempted. On the contrary, they have been discouraged and have turned their thoughts to other professions, believing that they may successfully pursue a four year premedical course only to be refused entrance to Medical School.

As a profession, we can lift up our head. If we are to do our share, in proportion to the United States population we, as a state, must provide for the graduation of 120 doctors each year. It has been stated that we are a poor state and should not be expected to provide our quota in so expensive an undertaking as medical education. No true Kentuckian is likely to subscribe to this philosophy. It will be a matter of civic pride to many of us if we can, without apology, carry our part of this load.

Nor will the quality of medical training

Opinions expressed in contributions to this journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

suffer. Hospital facilities will be available for teaching the larger classes. With more full time instructors and the cooperation of available, well trained clinical men, individual instruction to students may well be maintained at its present improved level. Our graduates have heretofore shown themselves capable of holding their own with the products of all other top ranking schools and they will continue to do so. Alumni of the University of Louisville School of Medicine have distinguished themselves during the present and past generations in the fields of Public Health, Teaching, Military, Research Medicine and in the Varied Specialties as private practitioners.

The University of Louisville, most of the time without and recently with some state aid, has kept the lamp of Medical Education aflame for well over a century. It has kept faith with Kentucky through thick and thin, through fat and lean decades. Let us, with loyalty and pride, salute her in the present enlarged undertaking.

Sam A. Overstreet, M. D.

LIFE'S MOST DANGEROUS DAY

More than twenty-five years ago, the late Dr. Joseph DeLee made the statement that "the most dangerous single day of an individual's life is the day of his birth." Since that time, deaths of infants from one month to one year of life have decreased markedly, and life expectancy beyond the age of sixty-five has increased considerably also, so that Dr. DeLee's statement deserves re-emphasis.

Under the provocative title, "Twenty-four hours to live?" in the September Better Homes and Gardens, Ann Usher summarized research efforts being carried out in various centers in regard to stillbirths and neonatal deaths. The Chicago Department of Health called attention to "The Challenge of Natal Day Deaths" in a bulletin issued several years ago. The A.M.A. held a symposium on "Perinatal Mortality" at the June 1954 meeting. These papers have since been published in the Journal of the A.M.A.

Kentucky has contributed its fair share to the current national "baby boom." In 1953 (the last year for which official figures are available) our birth-rate was 24.9 per 1000 population, which is high. Our neonatal death-rate was 21.2, which was above the national average of 20.5 per 1000 live births. In addition, there were 17.6 stillbirths per 1000 live births.

Unfortunately, the newborn death rate in Kentucky's most populous county (Jefferson) was higher in 1953 than the rate for the state as a whole. In 1954, newborn deaths constituted 70% of all deaths under one year of age.

A spot map of the city and county shows that neonatal deaths are most frequent among families residing near Louisville's hospitals. In addition to other socio-economic factors, one might well ask whether or not employment of pregnant women outside the home may have been a factor. A study is being made in Jefferson County at the present time to determine how long and at what tasks a pregnant woman may be employed in industry.

Health education to promote more adequate prenatal care should be increased. Close supervision and vigorous treatment of early toxemias will undoubtedly save babies and the occasional mother who succumbs to this complication of pregnancy. We must continue our efforts to obtain prenatal serology on as nearly 100% of pregnant women as possible. Rh determinations should be mandatory on at least all multiparae and on all primiparae with a history of transfusions.

We must also be continually vigilant with regard to standards of newborn care in hospitals. Trained personnel, not only on the 7:00 a.m. to 3:00 p.m. shift, when physicians make rounds, but also during the remaining 16 hours of the hospital day, should be insisted on. Oxygen equipment should be checked frequently. Provision of adequate moisture has been found to be an important factor in prevention of hyaline membrane disease of prematures, offspring of diabetic mothers, and infants delivered by section.

The Jefferson County Medical Society is studying its fetal and maternal deaths. A committee of nine members reviews all deaths, and holds quarterly open meetings in order to publicize its findings. At the same time, efforts are being made to improve facilities for newborn care. It is hoped that this pilot study, supported in part by the State Health Department may stimulate similar studies, particularly in counties like Jefferson, whose death rate is above the state and national average.

Margaret A. Limper, M. D.

ORGANIZATION SECTION

Senator Clements to be Luncheon Speaker, April 7, at the Fifth County Society Officers Conference in Lexington

Four Nationally Recognized Physicians to Participate. Panel and District Session to be Features

County Medical Society leaders will be presented a program of extraordinary value and practical appeal at the Fifth Annual County Society Officers Conference in Lexington, Thursday, April 7, 1955, at the Phoenix Hotel, it was announced by K.S.M.A President Clyde C. Sparks. M.D., of Ashland.

Five nationally prominent guest speakers, each distinguished by services he has rendered in his particular field, have been scheduled, along with several of K.S.M.A.'s own more effective leaders, to participate in this day long "symposium on public service."

All county medical society officers and committee-men, along with all K.S.M.A. chairmen, officers, and councilors are expected to attend, Dr. Sparks said. At the same time he emphasizes that all K.S.M.A. members are cordially invited to be present.

Medical legislative proposals faced by the 84th Congress will be discussed by the Honorable Earle C. Clements, U. S. Senator from Kentucky and Acting Majority Leader. The important aspects of the bills of most significance to the Profession will be explained. With the flood of legislative proposals that has been introduced into the new Congress, this presentation, said Dr. Sparks, will be of exceptional value to those attending the Conference.

Earle Clements

Phoenix Hotel

"The Case for Social Medicine," is the title of a talk by Peter L. Scardino, M.D., Savanah, Georgia, that will stir much interest among County Medical Society leaders, the program committee feels. Dr. Scardino, whose professional efforts are limited to the field of urology, has acquired nationwide eminence in his county medical society public service activity.

"The Vertical Approach to Community Influence" will be presented by C. Elliott Bell, M.D., an internist from Decatur, Illinois. An entirely new avenue of accomplishment will be given in this blueprint of county medical society public service efforts. The Macon County Medical Society, under the leadership of Dr. Bell, has developed a total of "Seven Firsts." County societies all over the nation are profiting by the pioneering efforts of the Macon County groups, it was stated.

"Fees, Statements and Patients" will provide material for an extraordinary presentation of intensely practical value by a small town phy-

(Continued on page 234)

Fifth Annual County Medical Society Officers Conference

Phoenix Hotel **Thursday, April 7, 1955**

9:00 A.M. **Registration**
Pre-meeting showing of movie

MORNING SESSION

Fireside Room

Clyde C. Sparks, M.D., presiding

President, Kentucky State Medical Association

9:40 **Call to Order and Announcements.** Clyde C. Sparks, M.D.
Welcome. Nathaniel L. Bosworth, M.D., Lexington,
President Fayette County Medical Association
Greetings from the Headquarters Office.
Bruce Underwood, KSMA Secretary and General Manager

9:55 **"K.S.M.A. and You"**
Garnett J. Sweeney, M.D., Liberty,
Councilor 12th District K.S.M.A.

10:15 **"Fees, Statements and Patients"**
Walter L. Portteus, M.D., Franklin, Indiana,
President Indiana State Medical Association

10:35 **"The Vertical Approach to Community Influence"**
C. Elliott Bell, M.D., Decatur, Illinois
Chairman Macon County Medical Society Public
Relations Committee

11:05 **"The Case for Social Medicine"**
Peter L. Scardino, M.D., Savannah, Georgia
Chairman Chatham County Medical Society Public
Relations Committee

11:25 **"How My County Society Does It"**
Panel—Moderator, George Brockman, M.D., Greenville

11:45 **Discussion**—Branham B. Baughman, M.D., Frankfort
Chairman of the Council

12:00 **Councilor Districts Group Meetings**

12:30 **LUNCHEON SESSION**

P. D. R. 2 & 3

1:30 **"Medical Legislation on Capitol Hill"**
Honorable Earle C. Clements
Senator from Kentucky

AFTERNOON SESSION

P.D.R. 2 & 3

J. Gant Gaither, M.D., presiding

President-Elect, Kentucky State Medical Association

2:00 **"How the A.M.A. Serves You and the Public"**
Ernest B. Howard, M.D., Chicago, Illinois
Assistant Secretary of the A.M.A.

2:25 **"Indigent Medical Care in Kentucky"**
Gaithel L. Simpson, M.D., Greenville,
Chairman K.S.M.A. Committee on Medical Service

2:45 **Discussion**

3:00 **Adjournment**

SENATOR CLEMENTS TO BE SPEAKER

(Continued from page 232)

sician, Walter L. Portteus, M.D., Franklin, Indiana, president of the Indiana State Medical Association. By going to the heart of these vital, every day questions, the program committee feels that Dr. Portteus, a medical leader of broad acclaim, will be of great value to physicians attending the conference.

Dr. Scardino

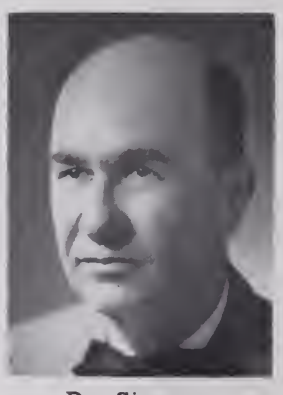
How the American Medical Association plays a helpful and vital part in the day to day practice of the K. S. M. A. member and the multitude of "taken-for-granted" contributions it makes will be discussed by Ernest B. Howard, M.D., Chicago, assistant secretary of the A.M.A. Dr. Howard's speech, the committee said, will give a wealth of practical information and will be most worthwhile.

"Two of our highly effective and devoted servants of the profession will also take part in the April 7 session," Dr. Sparks said, "along with members of four county societies, who will participate in a panel. Each panel member will present an activity that has been of outstanding success in his own community."

Conference attendants will be acquainted with some of the high points of K.S.M.A. services to its members by Garnett Sweeney, M.D., Liberty, councilor from the 12th District and president of the Kentucky Academy of General Practice.

Gaithel Simpson, M.D., Greenville, chairman of the K.S.M.A. Committee on Medical Service, will discuss the work his committee has been doing in the field of indigent medical care in Kentucky. The president stated that this is a matter of growing concern to Kentucky physicians.

Dr. Sweeney



Dr. Simpson

Still another feature of the county society officers' meeting will be the period which has been set aside for all district councilors to meet simultaneously with county medical leaders representing the counties of the respective districts. B. B. Baughman, M.D., Frankfort, chairman of the K.S.M.A. Council, feels that this will be one of the highpoints of the conference. He urges the county officers to plan on meeting with their councilor at that time.

Dr. Hancock Heads Advisory Group Appointed by Dept. of H.E.W.

J. Duffy Hancock, M.D., Louisville, has been named by the Social Security Administration to serve as chairman of the Medical Advisory Committee which is to give council to the Administration on medical aspects of administering the new "disability freeze" provision in the social security law.

Dr. Hancock's appointment was made public February 8 by the U. S. Department of Health, Education, and Welfare, through Charles I. Schottland, Commissioner of Social Security in the Department.

The "disability freeze" provision is similar to the waiver of premium in commercial life insurance and permits a worker to keep his old-age and survivors insurance rights intact when he is totally disabled for work for an extended period.

The determination as to whether a worker is totally disabled within the meaning of the law will be made by the vocational rehabilitation agency or other appropriate agency in the individual's own State under a voluntary agreement made by the State with the Secretary of Health, Education, and Welfare.

Dr. Hancock served as K.S.M.A. president during the 1953-54 year. He is professor of clinical surgery at the University of Louisville School of Medicine and retired as president of the Southeastern Surgical Congress at its 25th anniversary session in Atlanta last month. Included in the honors received by Dr. Hancock is the Award for Distinguished Service of the American Cancer Society, the Bronze Star and the French Croix de Guerre, the latter two developing from service in Europe during World War II.

The 15-member advisory committee, composed of individuals broadly representative of the medical profession and several experts in related fields, will help the Bureau of Old-Age and Survivors Insurance of the Social Security

Administration to set up guides and procedures for obtaining and interpreting medical evidence as to existence and extent of disability, Mr. Schottland said. These guides and procedures will be followed by the agencies in all States which have entered into the agreements to insure disabled workers all over the Nation equal treatment under the law.

Nomination Group to Meet With County Officers April 7

K.S.M.A. members planning to recommend the nomination of their colleagues for the various general offices for the 1955-56 year will have an opportunity to consult with the Nominating Committee which will serve for the 1955 Annual Session when the Nominating Committee holds its first meeting at the Luncheon session of the County Society Officers Conference, Thursday, April 7, at the Phoenix Hotel in Lexington.

The Council of K.S.M.A. at its last meeting voted to ask the nominating group, elected at the 1954 Annual Session by the House of Delegates, to meet at this time and organize. In addition, the Council instructed the Committee to schedule an open meeting as the first session of the 1955 House of Delegates gets under way on the evening of September 26. Report of the Nominating Committee will be the last order of business at the first meeting of the House.

Members of the 1955 committee elected by the 1954 House are: Charles M. Edelen, M.D., Louisville; Coleman Johnston, M.D., Lexington; Robert W. Robertson, M.D., Paducah; Richard Rust, M.D., Covington, and Charles B. Stacy, M.D., Pineville.

Dr. Sparks Urges Members to Pay Annual KSMA Dues by April

April 1 has been set by the Council of the Kentucky State Medical Association as the deadline for the payment of the 1955 annual K.S.M.A. dues.

"If you have not already done so, we would like to respectfully urge you to send your County, K.S.M.A. and A.M.A. dues to your county medical society secretary during March," President Clyde C. Sparks, M.D., Ashland, said.

Among the benefits that the president listed being lost through the failure to remit dues were, the cancellation of the annual subscrip tion to the Journal of the K.S.M.A., withdrawal of support to organized medicine and the many public service projects it sponsors, and jeopardizing the right to continue carrying certain needed insurance and other privileges that go with membership in the State society.

Dr. Sparks complimented the fine work of the many county medical society secretaries and indicated that dues were being received at the headquarters office at a very satisfactory rate.

"Senior Day", April 18, Will Feature Dr. Price

Julian Price, M.D., Florence, S. C., will be the featured speaker at the dinner closing the first annual Senior Day program, Monday, April 18, at the Kentucky Hotel in Louisville, W. Vinson Pierce, M.D., Covington, chairman of the special K.S.M.A. Senior Day program committee, announced.

Dr. Price

The Jefferson County Medical Society will be host to the members of the 1955 senior class of the University of Louisville School of Medicine, at the dinner social hour, Gradie Rountree, M.D., Louisville, president of the Jefferson County group, said.

The program, for the first observation of "Senior Day" by the K.S.M.A. will start at 2:00 p.m. that afternoon, according to Dr. Pierce. It will include talks and panels which are designed to help the students "bridge the gap" between his academic training and the actual practice of medicine, it was pointed out.

"Beyond the Ranges" is the title of the address Dr. Price will give. Long among the more prominent and useful members of the profession, Dr. Price again received national acclaim because of a speech given during the last meeting of the American Medical Association. Among other things, Dr. Price is a member of the A.M.A. Board of Trustees and the Joint Commission on Accreditation of Hospitals, and Dean of the Southern Pediatric Seminar.

"Our Committee is most grateful to the Jefferson County Medical Society and to J. Murray Kinsman, M.D., Dean at the Medical School, for their splendid cooperation. It is felt that their contributions will insure the success of this most significant first Senior Day

observation of the State Medical Association," Dr. Pierce said.

Other Committee members are Glenn Bryant, M.D., W. O. Johnson, M.D., and Karl Winters, M.D., all of Louisville.

Four OB-GYN Groups to Meet March 31 - April 2

Four different obstetric and gynecological organizations are meeting concurrently in Louisville, March 31 to April 2. Organizations represented are: The Kentucky Obstetrical and Gynecological Society, The Continental Obstetrical and Gynecological Society, District Five of the American Academy of Obstetrics and Gynecology, and the Tri-City Obstetrical and Gynecological Society.

The meetings will unfold in the following chronological order, according to Laman Gray, M.D., Louisville, program chairman for the Continental, Fifth District and Tri-City groups: Thursday morning, the Louisville host physicians will give a program for the Continental group between 9:00 and 12:00 a.m. at Rankin Amphitheatre at the Louisville General Hospital.

At this meeting, papers will be presented by Glenn Bryant, M.D., who will speak on "Carcinoma of the Cervix"; Rudolph Vogt, M.D., on "Induction of Labor", William Christophorsen, M.D., on "Lymph Node Changes after Various Forms of Irradiation Therapy"; Malcolm Barnes, M.D., on "Lesions of the Cervix"; Edward Masters, M.D., on "Ultra-Sonic Therapy", and William Keller, M.D., on "Psychiatric Aspects of Gynecology."

On Friday morning, April 1, from 9:00 to 1:00 in the Rankin Amphitheatre, visiting members of the Continental Society will give the program for the Louisville physicians. These papers, according to Dr. Gray, will be presented by nationally known men of the specialty and are to be announced. It was emphasized that all K.S.M.A. physicians are invited to attend the scientific sessions during the three days.

The Kentucky Ob-Gyn Society will hold its meeting Friday evening, April 1. A social hour will open the session and will be held in the South Room of the Brown Hotel, and will be followed by a dinner, according to J. B. Marshall, M.D., Louisville, president of the state group. The scientific program, given by residents of the Louisville General Hospital, will follow the dinner. After the scientific session, the annual business meeting and election of officers will be held.

"The Immediate Use of Triple Sulfa Post-Partum" will be presented by David Groenig, M.D., and Rand Johnson, M.D. "Prematurity" will be discussed by Mervel Hanes, M.D., and "Obesity in the Pregnant Woman" is the topic chosen by John Petry, M.D., according to Dr. Marshall. The author of the paper adjudged as being the best will receive a reward.

Saturday, April 2, the Tri-City Society of Obstetrics and Gynecology and the Fifth District of the American Academy of Obstetrics will hold a joint meeting in the Brown Hotel. The program for the morning follows:

"A Study of Ovarian Cysts" by W. O. Johnson, M.D., Louisville; "Some Aspects of Prolonged Labor" by Silas Starr, M.D., Louisville; "A Diagnosis of Some of the Common Conditions of the Female External Genitalia", with Kodachrome demonstrations, by A. B. Loveman, M.D., Louisville; "Precision Radium Therapy in Cancer of the Cervix", by Gilbert H. Fletcher, M.D., Houston, Texas, official guest of the Tri-City Society.

Luncheon will follow on the Roof Garden. The afternoon session will be given over to Round Table discussions covering the following subjects: Therapy of Carcinoma of the Cervix; Premalignant Lesions of the Cervix; Ovarian Cancer; Bleeding in Late Pregnancy; Sterility; Endometrial Carcinoma; Hormone Therapy in Pregnancy; Ectopic Pregnancy. Each panel will include nationally recognized members of the academy.

To these meetings, Dr. Gray said, all K. S. M. A. members are cordially invited. At 4:00 p.m., District Five of the American Academy of Obstetrics and Gynecology will hold a closing business session.

Winding up the series of Obstetrical and Gynecological sessions will be the Banquet at 7:00 in the Ball Room of the Brown Hotel, with W. F. Mengert, M.D., Dallas, Texas, president of the American Academy of Obstetrics and Gynecology, being the guest speaker.

Three New Hospitals Planned by Kentucky Communities

Three Kentucky communities are planning for the building of new hospitals, according to published reports. At Mt. Vernon, plans for the Rockcastle County Hospital are expected to be finished at an early date, and construction is slated to start in the spring.

At Olive Hill, a project for building a hospital to serve the three counties of Elliott, Rowan and Lewis was discussed at a meeting of a civic group, and it was hoped that under the Hill-Burton Act, the community could raise 250,000 dollars to be matched by an equal

amount from the federal government for a 500,000 dollar hospital.

Citizens of Irvine met in January to appoint a committee to raise money locally to pay for a hospital site. The hope was expressed that a larger and better hospital can be built in this manner, with the government matching proceeds from the bond issue for the actual construction costs of the hospital.

Ky. AGP to Present Six Guest Speakers April 20-21

Donald G. Cooley, Scarsdale, New York, magazine editor and writer, will be the featured speaker at the annual dinner meeting the evening of April 20, which is the half-way point of the annual two day meeting of the Kentucky Chapter of the Academy of General Practice, at the Brown Hotel in Louisville.

Mr. Cooley

Among the six nationally known scientific essayists will be Howard F. Root, M.D., Boston Massachusetts who has limited his practice largely to diabetes. Other guest speakers are: William T. Fitts, Jr., M.D., Philadelphia, Pennsylvania; Charles A. Hufnagel, M.D., Washington, D.C., James O. Ritchey, M.D., Indianapolis, Indiana; Bernard Weinstein, M.D. New Orleans, Louisiana; and Perry Culver, M.D., Boston, Massachussetts.

According to Garnett Sweeney, M.D., Liberty, president of the Academy, Mr. Cooley is the managing editor of Your Health, Your Life, Woman's Life, and associated magazines. In addition, he has written several books for laymen on medical subjects. Mr. Cooley calls himself "an interpreter between the scientist and the layman."

Dr. Root

Four Kentucky physicians will present papers at the sessions. They are Marion Beard, M.D., Robert Lich, M.D., John Llewellyn, M.D., and Herbert Clay, M.D., all of Louisville. J. A. Bishop, M.D., Jeffersontown, will welcome the visitors.

All K.S.M.A. members are invited to attend the scientific and dinner meetings. Following is the complete program:

PROGRAM

BROWN HOTEL

KENTUCKY CHAPTER OF AMERICAN ACADEMY OF GENERAL PRACTICE

Louisville, Kentucky **April 20-21, 1955**

April 20

Garnett Sweeney, M.D., presiding

8:00 **Registration**

8:45 **Invocation**
Welcome—J. A. Bishop, M.D., Louisville

9:00 **"Oral Treatment of Pernicious Anemia"**
Marion Beard, M.D., Louisville

10:00 **Visit Exhibits**

10:30 **"Renal Failure"**
Robert Lich, M.D., Louisville

11:30 **"Some Pitfalls in the Diagnosis of the Acute Surgical Abdomen"**
William T. Fitts, Jr., M.D., Philadelphia, Pennsylvania

12:30 **Luncheon**

2:30 **"Emergencies in Diabetes"**
Howard F. Root, M.D., Boston, Massachusetts

3:30 **Visit Exhibits**

4:00 **"Management of a Recently Discovered Diabetic"**
John Llewellyn, M.D., Louisville

5:00 **Business Meeting for all Members**

7:00 **Subscription Dinner**
Speaker, Donald Cooley, Scarsdale, New York

April 21

H. Burl Mack, M.D., presiding

8:30 **Registration**

8:45 **Invocation**

9:00 **"Management of Rhythm Disturbances"**
Herbert L. Clay, M.D., Louisville

10:00 **Visit Exhibits**

10:30 **"Surgical Therapy in Cardiovascular Disease"**
Charles A. Hufnagel, M.D., Washington, D. C.

11:30 **"Thromboembolism"**
James O. Ritchey, M.D., Indianapolis, Indiana

12:00 **Luncheon**

2:30 **"The Sterile Couple"**
Bernard Weinstein, M.D., New Orleans, Louisiana

3:30 **Visit Exhibits**

4:00 **"Viral Hepatitis"**
Perry Culver, M.D., Boston, Massachusetts

5:00 **Adjournment**

KSMA Places "Today's Health" in One-Hundred Ky. Bookmobiles

Each one of the more than 100 Bookmobiles in Kentucky will receive an annual subscription to the magazine "Today's Health" published by the A.M.A. as a gift of the Kentucky State Medical Association, Clyde C. Sparks, M.D., Ashland, K.S.M.A. president, has announced.

The recommendation that this be done was made by the Woman's Auxiliary to the Kentucky State Medical Association, was unanimously accepted by the Council, and approved by the House of Delegates.

"This is the first gift of its kind the Bookmobile has received," Miss Frances Jane Porter, Frankfort, Director of the Kentucky Library Extension Division, announced. She said Today's Health is now the only magazine available through the Bookmobile. She hoped that other organizations would follow the Medical Association's lead, since good reading matter is so acutely needed.

"The staff of the Kentucky Library Extension Division is more than delighted," Miss Porter added. "The articles found in Today's Health are the very things our readers are so eager to get, because they provide such practical answers to the health problems so many of our readers face."

The Bookmobiles operate on daily schedules covering their territory completely approximately every two weeks. Each Bookmobile contains up to 3,000 volumes, which are available to their readers.

Student AMA Considers Stipends, Contests and Taxes

"In the spring a young man's fancy turns to . . . thoughts of an internship," said William Vonder Haar, president of the University of Louisville Chapter of the Student American Medical Association, following a meeting of his group held January 24 in the Amphitheatre at Louisville General Hospital.

According to Mr. Vander Haar, the important issue in the minds of the senior medical students is the establishment of a minimum stipend for interns. Many students, he added, particularly those married ones with families, must by necessity take the stipend into consideration in choosing the hospital in which they will intern, when perhaps they would rather consider only those factors which would help them gain better experience to benefit them in their practice of medicine.

In addition to their interest in internships and stipends, the SMA members are actively engaged in writing articles on "A Medical Student Looks at Blue Shield" with the hope of winning an all-expense-paid trip to the nation-

Burt Blackwell, Bob Kay, Ryan Halloran, Foster Brooks, Rosemary Dean and Livingston Gilbert, all of WAVE-TV, shown as they presented a dramatic skit, "Death's Annual Report", at the 1955 Kentucky Rural Health Conference. The playlet, which won high acclaim at the conference, was produced by Mr. Blackwell, and the script adaptation was by Jesus Mendivil, also of WAVE-TV.

al convention in Chicago. This contest, sponsored by The Blue Shield of Kentucky, offers a second prize of $50.00 and a third prize of $25.00 for the best essay.

Mr. Vander Haar added that their January meeting was also highlighted by a talk on the new tax laws and the manner in which they affect the medical students by Mr. Harold B. Williams, a certified public accountant.

Miss Lila Ann Hargin, Vine Grove, is the secretary of the group, and Ray Rose, Lexington, is treasurer.

"Vaginal Hysterectomy" is Title of Book Authored by Dr. Gray

Laman A. Gray, M.D., Louisville, associate professor of Obstetrics and Gynecology at the University of Louisville School of Medicine, has written and had published a book entitled, "Vaginal Hysterectomy."

Dr. Gray

The book was written primarily for the operator who performs a generous amount of pelvic surgery, and vaginal hysterectomies at intervals, but not so many that he feels expert at the latter, according to Dr. Gray. He hopes for it to fill the additional purpose of serving the residents in training, who realize the importance of this operation, Dr. Gray added.

The author is a member of the Central Association of Obstetricians and Gynecologists, the American Academy of Obstetrics and Gynecology, and the Society of Pelvic Surgeons, as well as a number of other specialized medical groups. Dr. Gray's book, which is beautifully illustrated with original drawings, is being reviewed in this issue of the Journal in the department "In the Books."

Dr. Bailey Gets A.M.A. Post

Clark Bailey, M. D., Harlan, has been informed by the Board of Trustees of the A.M.A. that he has been re-appointed to serve a five year term on the A.M.A. Committee on Legislation.

Dr. Bailey is vice-president of the A.M.A. and one of the K.S.M.A. delegates from Kentucky to the A.M.A. He is also a member of the A.M.A. Committee on Industrial Care, and past president of K.S.M.A.

Easter Seal Sales Assist in Care of Handicapped Children

Surveys to determine whether special facilities are needed for physically handicapped children in two of Kentucky's counties are being conducted by the Kentucky Society for Crippled Children, as a part of its expanding program of service for 1955, it has been announced.

Through its Easter Seal receipts, the Kentucky Society finances aid to persons with ALL types of crippling physical disabilities through its own services and grants to other agencies. The Society depends upon the advice of the medical profession, the Kentucky Crippled Children Commission, State Department of Education, and other proper professional groups in developing its standards and projects.

The Society is the only state-wide private fund-raising agency working with ALL types of crippling. It supplements finances of the Crippled Children Commission to pay medical expenses, operates Cardinal Hill Hospital and Nursery School in Lexington, and Opportunity School in Covington.

It finances the State Division of Education for Exceptional Children's speech and hearing program, pays salaries of several teachers, carries a large part of the financial burden of the Rehabilitation Center in Louisville, and provides parent training, special appliances and limbs, camping and recreation hospital equipment and other services.

Nominations for 2 KSMA Annual Awards Are Requested

All county medical societies and members have been asked to submit their nominations for the two K.S.M.A. awards, which will be presented at the 1955 Annual Meeting, September 27, 28 and 29, at an early date.

Any county society or member may submit a nomination for either the Distinguished Service Medal or the Outstanding Practitioner Award. The former is awarded on the basis of the physician's contribution to organized medicine, individual medical service, community health education and civic betterment, medical teaching and research, and active military service.

The K.S.M.A. Award to the Outstanding Practitioner is presented at the Annual Meeting to honor the general practitioner in the State who has contributed most to his community, state and nation. The recipient is then

eligible to compete for the General Practitioner Award of the A.M.A.

Procedure for selecting the award winners was changed at the 1954 meeting of the House of Delegates. Acting on the recommendation of the Council, the House voted to authorize its speaker to appoint a committee of five (not necessarily members of the House) to serve throughout the year for the purpose of selecting the recipients of these two honors. The committee will report at the first meeting of the House of Delegates next September.

Members of the committee are: R. C. Strode, M.D., Lexington, chairman; H. B. Stone, M.D., Hopkinsville; L. T. Minish, M.D., Louisville; P. A. Bryan, M.D., Ashland; and J. H. Kurre, M.D., Owensboro. Nominations for the awards should be sent to the Headquarters Office, 620 South Third Street, Louisville.

Scientific Exhibitors Urged to Apply for Space

Space for Scientific Exhibits at the Annual Meeting of the Kentucky State Medical Association, September 27-28-29, should be reserved soon, Everett L. Pirkey, M.D., Louisville, chairman of the K.S.M.A. Committee on Scientific Exhibits, announced.

Prospective applicants are urged to plan their exhibits carefully with the best possible utilization and conservation of space in mind, as space is limited.

The application form on page 254 should be filled out and mailed in at an early date, said Dr. Pirkey. The deadline for mailing applications is July 1, 1955. No assignments will be made after this date, according to Dr. Pirkey.

Dr. Bauer to Speak at Auxiliary's Doctors' Day Health Forum

W. W. Bauer, M.D., Chicago, director of Health Education of the A.M.A. and editor of Today's Health magazine, will be the guest speaker at the Kentucky Doctors' Day Health Forum, April 13, at the Strand Theatre in Louisville.

The Woman's Auxiliary to the Jefferson County Medical Society is sponsoring the Health Forum in cooperation with the Louisville Courier Journal and Times, according to Mrs. Earl W. Roles, president of the Auxiliary. The program is being designed to promote health education, particularly among the women of the community, said Mrs. Roles.

Dr. Bauer will speak on "The Family Doctor —1955", with a panel discussion following. In addition, a talk by Louis M. Foltz, M.D., Louisville, on "Worry—Asset or Liability" will be followed by panel discussion, as will a speech by Clayton McCarty, M.D., Louisville, on "Your Future At Forty".

First District Meeting at Murray Feb. 17, Concludes Heart Day

"Treatment of Coronary Heart Disease" was the subject of a paper presented by Woodford B. Troutman, M.D., Louisville, at the First Councilor District Meeting at Murray, February 17, which was attended by physicians from eight counties.

J. Vernon Pace, M.D., Paducah, councilor, stated that the First District Meeting at Murray had become somewhat of a tradition. The meeting this year concluded Heart Day in Murray. A number of clinics were held as part of the day's activities.

Dr. Troutman, who specializes in cardiology and is associate professor at the University of Louisville School of Medicine, made his talk at a dinner prepared by the Home Economics Department of Murray State College.

Ky. Surgical to Meet 20 & 21

The Kentucky Surgical Society will hold its 1955 annual session at the Homestead Hotel in Hot Springs, Virginia, May 20 and 21, Francis Massie, M.D., Lexington, society secretary has announced.

The Department of Surgery of the University of Virginia School of Medicine will present the scientific program the afternoon of May 21. Dr. Massie said complete details of the program for the entire session would be announced in the April issue of the Journal of K.S.M.A.

Jewish Hospital to Open in Feb.

The new 118-bed Jewish Hospital on Chestnut Street, Louisville, opened in February, replacing the old Jewish Hospital at Floyd and Kentucky. The four-story building cost $2,700,000 including $200,00 worth of equipment, and is part of the University of Louisville Medical Center.

Public open house was held January 20. Many modern features are incorporated in the hospital, including a special "recovery room" for patients coming out of surgery, vacuum and oxygen outlets by each bed, and a dictating room for physicians. The first floor lobby is paneled in red gum, as is the chapel, which opens off the lobby.

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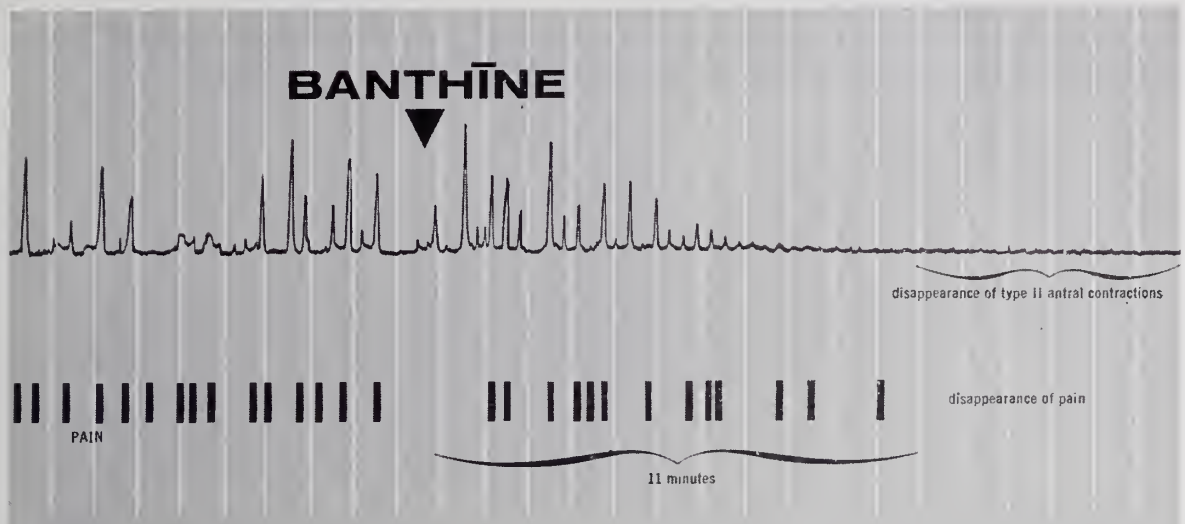

Effect of 100 mg. of Banthine administered orally on antral gastric motility and duodenal ulcer pain.

Hightower, N. C., Jr., and Gambill, E. E.: Gastroenterology 23:244 (Feb.) 1953.

Hypermotility and Hyperacidity

A recent evaluation of anticholinergic therapy in peptic ulcer emphasizes the fact that now the profession has at its disposal agents that are "effective in reducing both secretory and motor activity of the stomach."

The effect on motor activity is generally more pronounced and less variable than on secretion; pain relief is usually prompt; a high degree of effectiveness is noted in ambulatory ulcer patients.

Ruffin, J. M.; Texter, E. C., Jr.; Carter, D. D., and Baylin, G. J.: J.A.M.A. 153:1159 (Nov. 28) 1953.

With its proved anticholinergic effectiveness, Banthine has been found extremely useful in the medical management of active peptic ulcer, whether duodenal, gastric or marginal.

The immediate increase in subjective well-being and the simplicity of the Banthine regimen assures patient cooperation. The recommended initial therapeutic dose is 50 or 100 mg. (one or two tablets) every six hours around the clock, with subsequent individual adjustment. The usual measures of diet regulation, rest and relaxation should be followed.

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Banthine bromide (brand of methantheline bromide) is supplied in scored tablets of 50 mg. and in ampuls of 50 mg. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

Ky. Dental Ass'n. Meets in April

The 95th Annual Session of the Kentucky State Dental Association will be held in Louisville at the Kentucky Hotel, April 18-21, according to an announcement by E. A. Willis, D.D.S., Owensboro, president of the Association.

R. Arnold Griswold, M.D., Louisville, will be the medical exchange speaker. He will speak to the group on Tuesday, April 19, at the luncheon on the subject of "Prevention of Injuries in Automobile Accidents." Daniel F. Lynch, D.D.S., president of the American Dental Association, will speak at the Wednesday Luncheon on "Fifty Years of Dental Progress," after which plaques will be awarded those members who have been in practice for fifty years.

Dr. Juers to Present Paper

Arthur L. Juers, M.D., Louisville, will present a paper entitled, "Current Concepts of Chronic Attic and Middle Ear Disease" at the A.M.A. Convention to be held in Atlantic City June 6-10, according to an announcement by Hugh A. Kuhn, M.D., Hammond, Indiana, secretary of the Section on Laryngology, Otology and Rhinology of the A.M.A. Dr. Juers is the author of a scientific article, "The Tonsil and Adenoid Problem," appearing in this issue of the Journal of the K.S.M.A.

1955 Golf Committee Appointed

J. Gant Gaither, M.D., Hopkinsville, chairman of the Arrangements Committee of the K.S.M.A. Annual Meeting and president-elect of the Association, announced the appointment of the following members to the K.S.M.A. Golf Committee:

Clifton G. Follis, M.D., Glasgow, chairman; Joseph R. Humpert, M.D., Covington; Robert Long, M.D., Louisville; Sam A. Overstreet, M.D., Louisville; William C. Wolfe, M.D., Louisville.

Foundation Seeks Members

The Kentucky Medical Foundation mailed 6000 membership invitations to Kentucky farm, business, medical and civic leaders during February, according to published reports. Foundation President J. Stephen Watkins said membership in the non-profit organization, the goal of which is to establish a State-supported medical school at the University of Kentucky, is open to all interested Kentuckians.

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Ky. Hospt. Ass'n to Meet April 12

A final program arrangement for the three-day annual meeting of the Kentucky Hospital Association in Louisville, April 12-14, has been reported by the association's headquarters. Frank Bradley, M.D., St. Louis, president of the American Hospital Association, will be the guest speaker at the annual Banquet, Wednesday night, it was stated.

Of interest on the program will be a panel on Thursday dealing with the general hospital, including services for psychiatry, tuberculosis, pediatrics, and long term illnesses. In addition to the Banquet, social activities will include a Buffet Supper on Tuesday night, and a Breakfast by the American Association of Hospital Administrators on Wednesday morning.

Flying Physicians Will Organize

A national society of flying physicians is being organized, according to an announcement from H. D. Vickers, M.D., Little Falls, New York, temporary chairman of the group. The purposes of the organization will be scientific, educational and social.

Physician pilots interested in arranging a scientific and social program at the A.M.A. meeting in Atlantic City, June 6-10, 1955, may write Dr. Vickers at 25 Jackson Street, Little Falls, New York.

New Members Welcomed

The Kentucky State Medical Association recently welcomed the following new members:

Lloyd P. May, M.D., Danville.
Francis R. Sherman, M.D., Martin.
W. A. Scroggin, M.D., Wheelwright.
Robert L. McKenney, M.D., Falmouth.
J. Campbell Cantrill, M.D., Georgetown.
Yan Shun Leung, M.D., Paintsville.

Dr. Hall Succeeds Dr. Holbrook

Following the resignation of Raymond N. Holbrook, M.D., of Louisville, as chairman of the K.S.M.A. Committee for Subscriptions to the American Medical Educational Foundation, it was announced that Delou P. Hall, M.D., Louisville, has been appointed to succeed Dr. Holbrook by K.S.M.A. President Clyde C. Sparks, M.D., Ashland. Dr. Hall attended a meeting of the A.M.E.F. January 23 in Chicago.

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BIOPSY OF THE BREAST

(Continued from page 225)

accessible for more adequate biopsy methods, it seems to me that the only occasion in which one is justified in using aspiration biopsy with the implied purpose of guiding treatment is to establish a pathologic diagnosis in an obviously inoperable carcinoma prior to irradiation or hormone therapy.

The other two methods, incisional and excisional, will be considered together, inasmuch as the approach is essentially the same. Under anesthesia (we prefer general), the breast is prepared as for a radical mastectomy. An incision is made over the mass, and the tumor is exposed in a dry field. Not only can the lesion in question be inspected, but also the adjoining breast tissue, which is certainly an advantage over aspiration biopsy. If the tumor is large, a small wedge may be excised with cold knife or cautery for pathologic study. Pathologists tell me that the former gives them more readable sections. If the tumor is small (2 cm. or less), the whole mass may be excised as a single specimen. As pointed out above, if a pathologist is at your side and an immediate frozen section report is available, with a positive report of "malignant neoplasm," one may proceed at once with radical mastectomy. If no pathologist is immediately available, or the pathologist cannot make a diagnosis from the frozen section examined, one can sterilize the wound, close, and wait for the report of paraffin section study. As in aspiration biopsy, the danger of spreading cancer cells by crossing normal breast tissue may likewise apply here, but the overall gain in exposure of the tumor and surrounding tissue outweighs the risk involved. To proceed with a simple mastectomy in lieu of a biopsy report is unwise; if the final report is benign, too much tissue has been removed; and if malignant, too little.

Summary and Conclusions

The high frequency of carcinoma of the breast has been called to your attention. The value of biopsy has been demonstrated, and its need stressed. The limitations have been noted. The various methods have been considered. A positive report of malignant tumor is of diagnostic value. A negative report means that carcinoma is not present in the tissue examined. Hence, the more tissue submitted, the greater the chance of finding cancer if it is present.

DR. JOHN RICE COWAN

(Continued from page 229)

and intellectual capacity—an evanescent thing which defies description but which is disciplined and fixed by use. In one of Cardinal Newman's books there is a list of human values, which reads in part:

> ". . . the ease, the self-possession, the courtesy, the power of conversing, the success in not offending; the lofty principle, the delicacy of thought, the happiness of expression, the taste and propriety, the generosity and forebearance, the candour and consideration, the openness of hand. . ."

The English language has a word which sums this up — a word much used and greatly abused. As has been pointed out by Vincent Massey, it has nothing to do with birth, or income, or occupation. There is no taint of false values, of artificial standards, or of the veneer so painfully acquired by those who wish to be thought superior. The qualities of which Mr. Massey spoke are rooted in tradition, in character, and in education in its best sense.

The word, epitomized in the life of John Rice Cowan, is, as you have anticipated—"Gentleman."

A bill (S. J. Res. 1) proposed by Senator Bricker, R., Ohio, January 6, proposes a constitutional amendment to restrict treaty-making power. It is identical with S. J. Res. 181 introduced in the second session of the last Congress and would prohibit treaties made in conflict with the U. S. Constitution, make a treaty ineffective as internal law if in conflict with state laws, and require a roll-call for ratification, according to a news letter from the Washington office of the A.M.A.

A bill introduced at the 84th Congress by Elliott, D-Alabama, on January 5 removes the length of service requirement for eligibility for pensions for non-service-connected veterans with permanent and total disability, according to the A.M.A. Washington Headquarters. Any veteran with permanent and total disability would be eligible for non-service-connected medical care if he had been in uniform as little as one day by the passage of this legislation, it was added by the Washington office.

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Pertinent Paragraphs

The American Goiter Association will hold its 1955 annual meeting in the Skirvin Hotel, Oklahoma City, April 28-30, according to an announcement by John C. McClintock, M. D., Albany, New York, secretary of the association. The program will consist of papers and discussions dealing with the physiology and diseases of the thyroid gland.

For the first time since 1948, technical exhibits will be arranged in connection with the annual meeting of the West Virginia State Medical Association, which will be at White Sulphur Springs, August 18-20, 1955. This is made possible by the completion of a new convention unit at the Greenbriar Hotel.

"Prescription for Medical Partnerships", a general information booklet on the business details of establishing and continuing a group medical practice, has been prepared by the medical director of a life insurance company. A copy can be obtained by writing to "Medical Partnerships", Field Service Division, P.O. Box 179, Cincinnati 1, Ohio.

A bill, S.248 (Smith, R-Me.) was introduced in the Senate which proposes to amend the Military Procurement Act of 1947 to provide for appointment of doctors of osteopathy to the medical corps of the Army and Navy, according to the A.M.A. Washington Office. This is identical with a bill, H.R. 483, introduced by Representative Short, R-Mo., in the House. The present policy of the Defense Department is that osteopaths may not be commissioned.

More than 1,200 bills were introduced the first day of the 84th Congress, according to the Washington Headquarters of the A.M.A. The initial flood of bills, an all-time record, covers a wide range of medical subjects, said F. E. Wilson, director of the Washington office.

Congress was formally requested by President Eisenhower on January 13 to extend the Doctor Draft two years beyond July 1, according to the A.M.A. Washington letter. If this proposal is acted upon favorably by Congress, the Doctor Draft will expire July 1, 1957. The President made no mention of the $100-a-month equalization pay now given all physicians called up under the Doctor Draft law.

A modified version of Universal Military Training under which physically fit youths between 17 and 19 years of age could volunteer for six months basic training, followed by active reserve participation for nine and one-half years, was requested for a four-year period by the President at the 84th Congress, according to the Washington Office. Young men planning medical careers would be deferred for premedical, medical and intern training, provided that they joined in weekly drills and summer training during this period.

A revised plan for health insurance for federal employees proposes a three-way option, according to the A.M.A. Washington Office. Workers could participate in (1) a new standard, nationwide plan; (2) existing plans sponsored by their own national employee organizations; or (3) local plans offered in their community or through local employee unions or other agencies. The standard plan would offer catastrophic or major medical care insurance. The annual cost of the U.S. contribution is estimated at 55 million dollars.

National Hospital Week will be May 8-14, according to an announcement by Edwin L. Crosby, director of the American Hospital Association. The theme of the week in 1955 will be "Your Hospital . . . A Tradition of Service." Celebration of a National Hospital Day began in 1921.

Seven thousand eight hundred physicians, 896 dentists, 14,833 nurses and 218 nurse-anesthetists would be included in a total of 23,000 professional employees in the Veterans Administration's Department of Medicine and Surgery receiving a pay raise, if Congress supports recommendations made by President Eisenhower. According to the announcement from the A. M. A. Washington Office, the raise probably would be the general 5% increase requested by the President for other federal civilian employees.

"Paternalism" was defined by Ralph R. Lounsbury, president of the American Life Insurance Convention, at the 49th annual meeting of the insurance executives, as "the doctrine of letting the government take care of the citizens, giving up the idea of taking care of one's self and family, and relying on the various units of government to step in and provide those things which the individual in earlier years had felt it was necessary for him to provide for himself."

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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The twenty-eighth annual spring congress of the Gill Memorial Eye, Ear, and Throat Hospital will be held in Roanoke, Virginia, April 4-9. Refresher courses will be conducted in Ophthalmology, Otolaryngology, and allied specialties. The object of the program is to give in a brief period of time a series of lectures and demonstrations on subjects of interest to all practitioners of the specialties. Further information and registration blanks can be obtained by writing D. G. Gill, M.D., Box 1789, Roanoke, Virginia.

The Heart Association of Ashland and Boyd counties has made a $1,500 grant to the University of Louisville School of Medicine "to interest young medical students in heart research." The announcement was made by Leslie Winans, M.D., of the Ashland Heart Group, and Hampden C. Lawson, M.D., Louisville, head of the department of physiology at the school of medicine. The grant is on a student training basis, Dr. Winan said, and the funds will be used to cover expenses incident to a particular research problem on which a student may be working.

William W. Hetherington, Evanston, Illinois, has been named managing publisher of "Today's Health", according to an announcement by George F. Lull, M.D., secretary-general manager of the A.M.A. Dr. Lull also announced a six-man editorial board for "Today's Health": Walter E. Vest, M.D., Huntington, West Virginia; Julian P. Price, M.D., Florence, South Carolina; Austin Smith, M.D., editor of the Journal of the A.M.A.; Mr. Leo Brown, director of the A.M.A.'s Department of Public Relations, and W. W. Bauer, M.D., chief editor of "Today's Health" and chairman of the editorial board.

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County Society Reports

BOYD

A. M. Lyon, M D., read a paper entitled "Psychiatry in a Troubled Social Order" at the January 4 meeting of the Boyd County Medical Society. The Society met in the Blue Room of the Henry Clay Hotel at Ashland, with 27 in attendance.

Following Dr. Lyon's talk, there was a general question and answer session on psychiatry.

The date of the next meeting was set for February 1, when A. L. Allen, M.D., a local radiologist, will read a scientific paper.

C. Wayne Franz, M.D., Secretary

BOYLE

Oscar Lloyd May, M.D., Danville, talked on "Stool Examination: (a) Occult Blood; (b) Steatorrhea; (c) Intestinal Parasites," at the January 25 meeting of the Boyle County Medical Society, attended by 14 members.

After Dr. May's presentation, there followed a general questions and answers session, with Stewart P. Hemphill, M.D., presiding.

The date of the next meeting of the group was set for February 22, and was to be held at the County Health Department, at Danville.

Stewart P. Hemphill, M.D., President

CALLOWAY

Conrad Jones, M.D., was elected as president of the Calloway County Medical Society, at its December meeting, held in the chapel of the Murray Hospital, December 7, 1954.

Robert Hahs, M.D., was elected vice-president, and Hugh Houston, M.D., as secretary-treasurer. The delegate for a two-year term is to be A. D. Butterworth, M.D.

The retiring president, C. C. Lowry, M.D., presided at the meeting. Dr. Houston reported that as yet he had not been advised of any action taken by the Fiscal Court in regard to the indigent people in the County Poor House.

It was voted by the group that they would participate in a Cancer Mobile Clinic, as requested by the American Cancer Society.

In addition to the above, the following members were present: J. L. Hopson, M.D., O. K. Mason, M.D., R. M. Mason, M.D., J. A. Outland, M.D., John Quertermous, M.D., Charles L. Tuttle, M.D., Birdsall Carle, M.D., Ben Bradford, M. D., and Administrator Warming.

J. L. Hopson, M.D., Secretary

HARDIN-LARUE

Oris Aaron, M.D., Elizabethtown, read a paper entitled "Peptic Ulcer" at the first 1955 meeting of the Hardin-Larue County Medical Society, held January 13, at the Hardin Memorial Hospital, Elizabethtown.

Following Dr. Aaron's presentation, there was a discussion of the paper by O. M. Richardson, M.D., Elizabethtown, radiologist at the Hardin Memorial Hospital, Elmer E. Pautler, M.D., chief of the pathology section, Army Research Laboratory, Ft. Knox, Ralph Thomas, M.D., general surgeon, Leitchfield, all guests of the society, and E. J. Sharman, M.D., Elizabethtown, general surgeon.

Also a guest of the society was Louis Aaron, M.D., Grundy, Virginia, who will be associated with his brother in the practice of surgery in Elizabethtown in the immediate future.

John M. English, Elizabethtown, president, stressed the importance of professional discussions and/or presentations of standing case reports at each meeting, and appointed the following members to serve on a program and arrangements committee: S. G. Bale, M.D., chairman, John D. Handley, M.D., and Thomas J. Ferriell, Jr., M.D.

MADISON

"Hypnosis in Dentistry and Medicine" was the subject of the program at the January 13 meeting of the Madison County Medical Society, at the First Presbyterian Church, Richmond.

Sixteen persons, including five dentists, were in attendance at the meeting, at which a practical demonstration of hypnosis was presented by C. B. Lambert, D.D.S., Scottsville, and H. R. Katy, M.D., Glasgow. A subject from among the members was chosen for the demonstration.

The history of hypnosis from ancient times to the present was given by Dr. Lambert. The Society recommended this program to other county medical societies over the state.

The date of the next meeting was set for February 10, at Berea College Hospital, Berea, Kentucky.

Max E. Blue, M.D., Secretary

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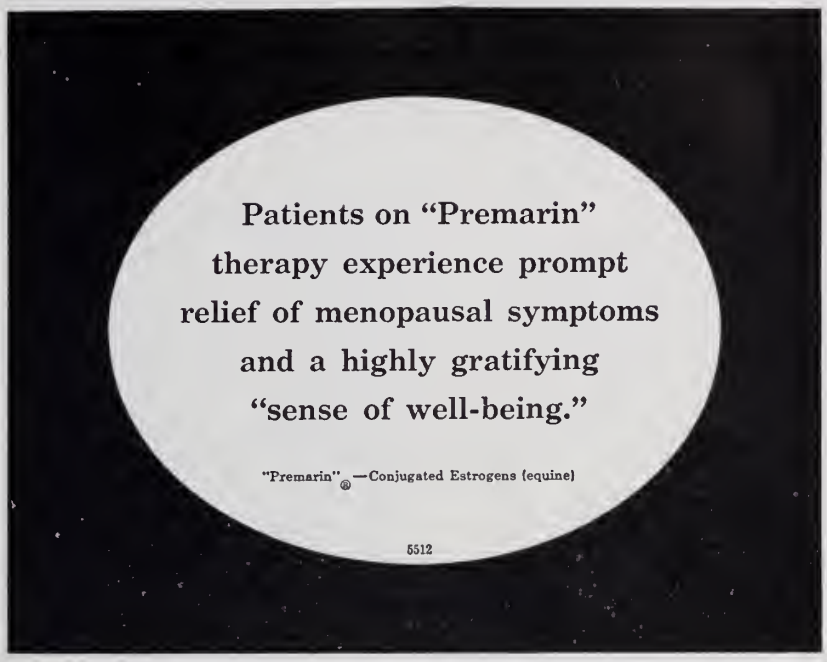

McCRACKEN

The election of officers for 1955 of the McCracken County Medical Society was held on December 15, 1954, with the following results: President, Merle W. Fowler, M.D.; Vice-President, William M. Myre, M.D.; Secretary, Walter R. Johnson, M.D.; Delegate for 1955 and 1956, James A. Ward, M.D.; Board of Censors, Harold D. Priddle, M.D.

Keith Sloan, M.D., presided at the meeting. Robert Lich, M.D., Louisville, read a paper on "Common Problems in Urology". Following his presentation questions and answers were given.

The meeting was adjourned at 9:00 p.m.

Walter R. Johnson, M.D., Secretary

SCOTT

The following officers were elected to serve in 1955 at the annual election of officers of the Scott County Medical Society, December 1, 1954, in Georgetown: J. Campbell Cantrill, M.D,. president, C. R. Lewis, M.D., vice-president, H. G. Wells, M.D., delegate to the Annual Meeting, Frederick W. Wilt, M.D., censor for three years, and H. V. Johnson, M.D., secretary-treasurer.

A motion was made, seconded, and carried that the schedule of fees as submitted by Dr. Cantrill be adopted. Another motion was made that the County Society dues be raised to $3.00 per year. This was carried.

Dr. Wilt reported that 97 patients were examined during the Diabetic Detection Drive.

In addition to the above, the following members were present: E. G. Barlow, M.D., W. S. Allphin, M.D., and A. F. Smith, M.D.

H. V. Johnson, Secretary

SCOTT

At the January meeting of the Scott County Medical Society, held at the John Graves Ford Memorial Hospital, H. V. Johnson, M.D., was appointed by James C. Cantrill, M.D., president, as a representative to meet with the trustees of the hospital. The members requested that Dr. Cantrill serve as a second representative.

A motion was made, seconded, and carried that F. W. Wilt, M.D., be elected as alternate delegate to the Annual Meeting of the Kentucky State Medical Association.

A talk on radio-active iodine, phosphorus and colloidal gold from a diagnostic and therapeutic standpoint was given by Mr. Robert Wilmout of Lexington, a guest at the meeting. Mrs. Teagarden, superintendent of the hospital, was also a guest.

In addition to the above, the following members were present: W. S. Allphin, M.D., E. G. Barlow, M.D.; G. R. Lewis, M.D.; A. F. Smith, M.D.; and H. G. Wells, M.D.

H. V. Johnson, M.D., Secretary

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SHELBY-OLDHAM

Four new members were elected to the Shelby-Oldham County Medical Society at its first 1955 meeting, January 27, at Stone Inn, Simpsonville.

They were: E. G. Houchin, M.D., La Grange, John R. Miller, M.D., and John H. Leland, M.D., both of Crestwood, and Shelby L. Hicks, M.D., New Castle.

A film on "Intravenous Anesthesia" was shown for the scientific program. There were 24 members in attendance at the meeting.

The date of the next meeting of the Society was set for February 24, at Stone Inn, Simpsonville.

C. C. Risk, M.D., Secretary

TRI-COUNTY

Ernest Jokl, M.D., Lexington, spoke on "General Problems of Rehabilitation" at the January 18 meeting of the Tri-County (Bourbon, Clark, Montgomery) Medical Society, at the Brown Proctor Hotel, Winchester.

Dr. Jokl, who is chief of the Kentucky Rehabilitation Center at Lexington, gave special emphasis in his talk on the Lexington Center. Slides were used to illustrate his remarks.

Twenty-five were in attendance at the dinner meeting. It was arranged that the February meeting would be held at the State Tuberculosis Sanitorium at Paris, with the program arranged around the subject of "Tuberculosis."

WARREN-EDMONSON

The December dinner meeting of the Warren-Edmonson County Medical Society was held at the Helm Hotel in Bowling Green with 23 in attendance.

It was approved that the visits of a consulting cardiologist to the Heart Clinic should be made several times during the year. Arrangements for Christmas presents for the nurses and aides at the City Hospital were approved.

Election of officers for 1955 was held and the following were elected: J. Y. Barbee, M.D., president, Martin Wilson, M.D., vice-president, and Charles M. Francis, M.D., secretary-treasurer.

The date of the next meeting was set for January 11, 1955, at Bowling Green, after which the meeting was adjourned at 8:00 p.m.

Charles M. Francis, M.D., Secretary

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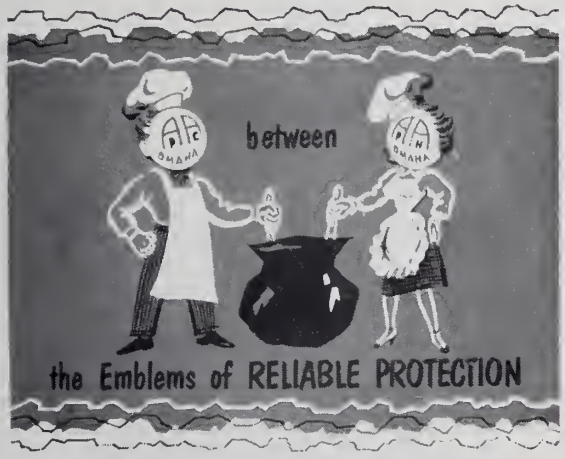

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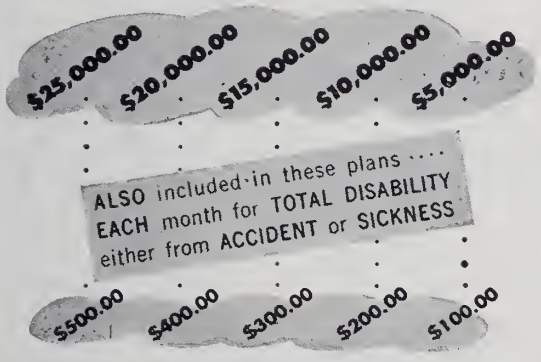

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In Memoriam

P. E. GIANNINI, M. D.
Louisville
1889 - 1954

Dr. Giannini, 65, a disability-rating specialist with the Veterans Administration in Louisville since 1949, died December 24, 1954, at the Kentucky Baptist Hospital in Louisville.

Dr. Giannini graduated from the University of Tennessee Medical Department in 1910. He practiced in Buffalo, New York, before coming to Louisville. He was a surgeon, as well as a doctor of medicine.

COLONEL CARROLL P. PRICE
Harrodsburg
1880 - 1954

Col. Carroll P. Price, 74, a retired army surgeon, died at Harrodsburg on December 13, 1954. Col. Price was the son of the late A. D. Price, M.D.

He was graduated from the Medical College of Ohio in 1903. He served in both world wars, and was retired from the Army Medical Corps in 1944, after which he resumed his practice in Harrodsburg. He received the Croix de Guerre from France in the first world war.

W. L. WALTER, M. D.
Winchester
1877 - 1954

Dr. Walter, who was 87 years of age, died at the home of a son in Winchester, Kentucky, December 23, 1954, after a long illness.

A native of Johnson County, Dr. Walter graduated in 1894 from the Kentucky School of Medicine, Louisville. After practicing medicine for several years in Eastern Kentucky, he became associated with the Chesapeake and Ohio Railway as a surgeon until his retirement.

O. T. STEPHENS, M. D.
Prestonsburg
1892 - 1955

Dr. Stephens, 62, died of a heart attack at his home in Prestonsburg January 2, 1955.

He was graduated from the University of Louisville Medical Department in 1918, and had practiced in Prestonsburg for 25 years. He was a veteran of World War I.

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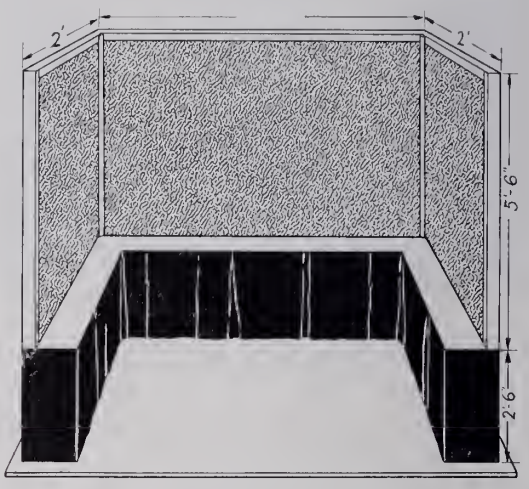

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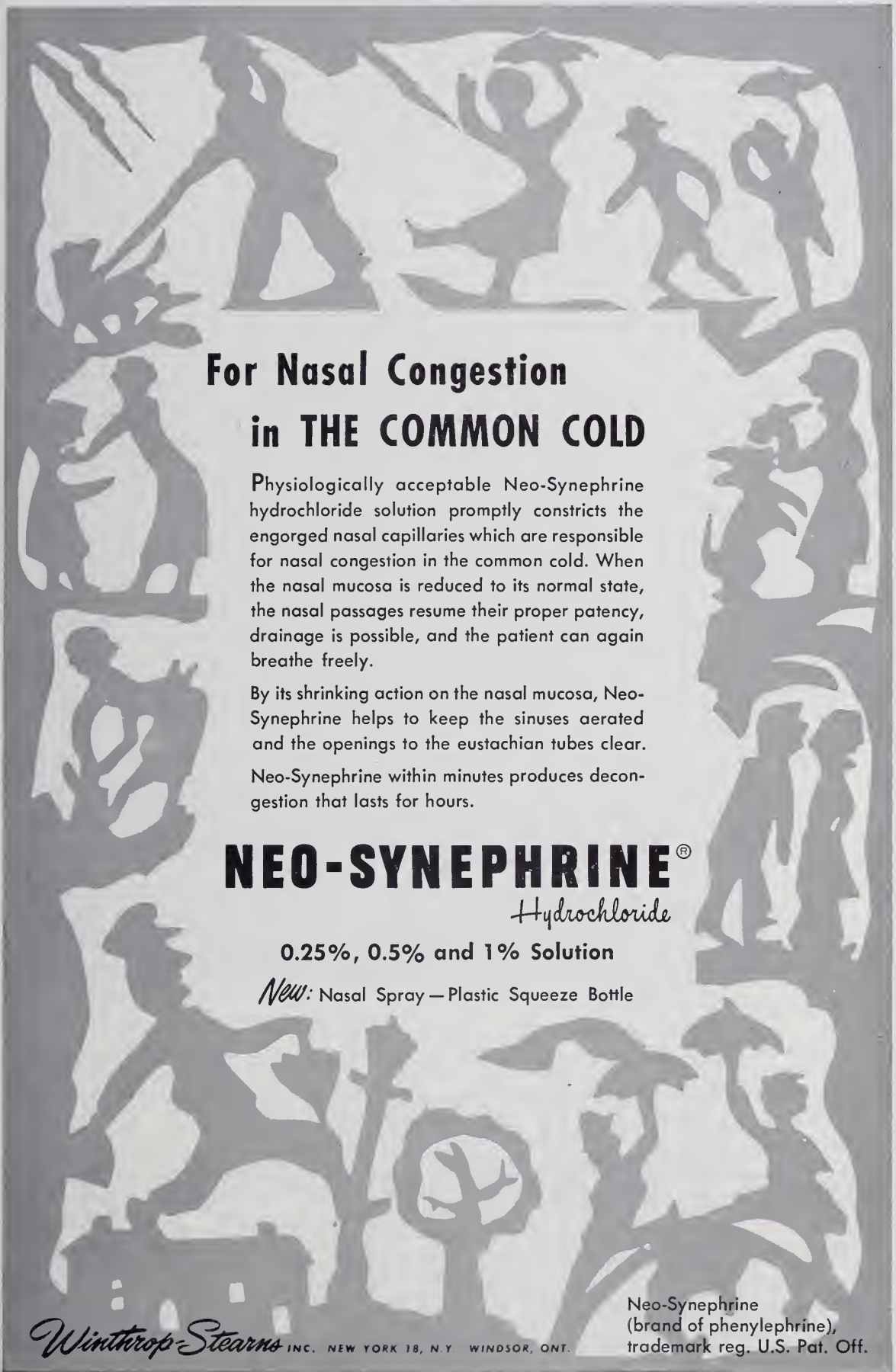

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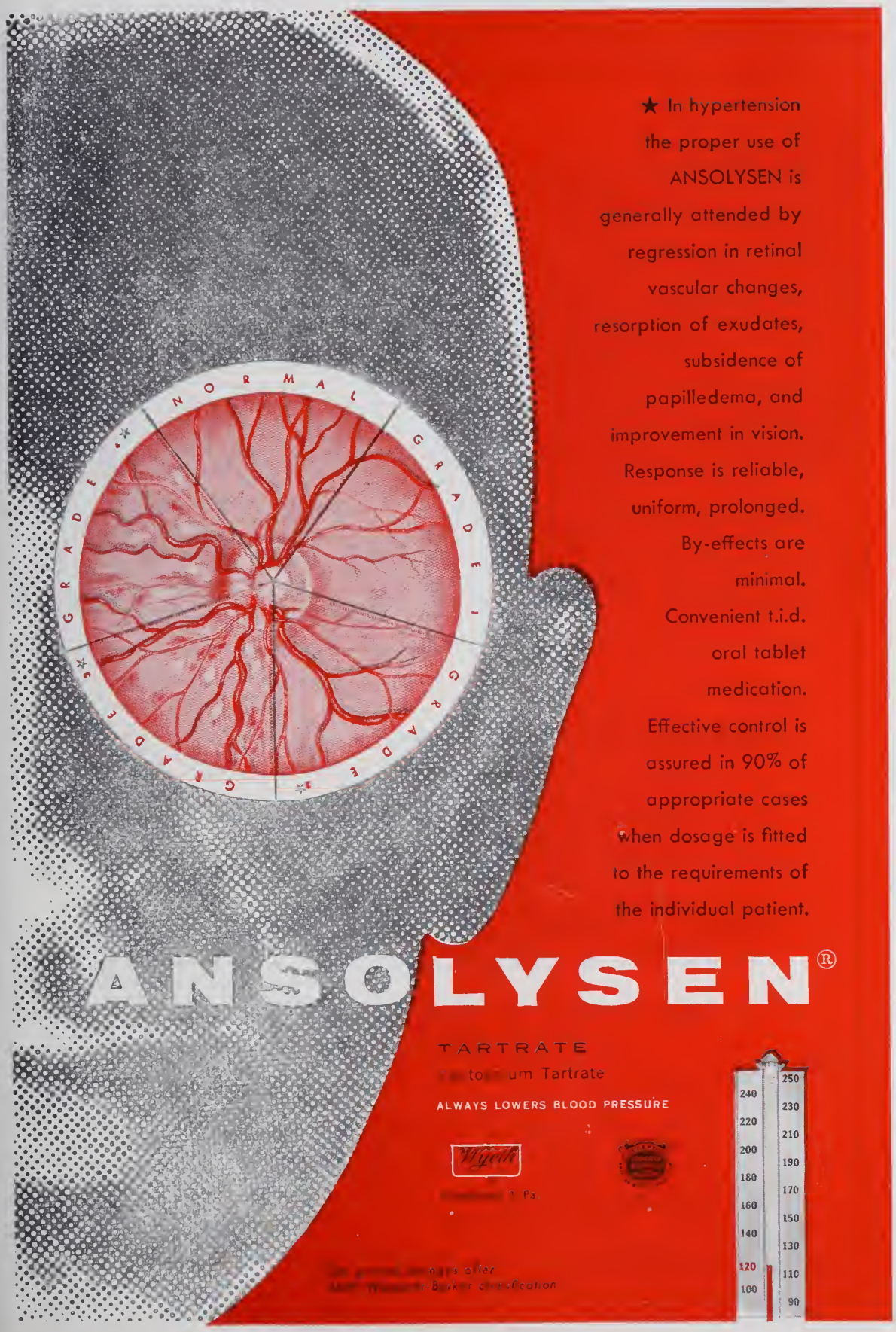
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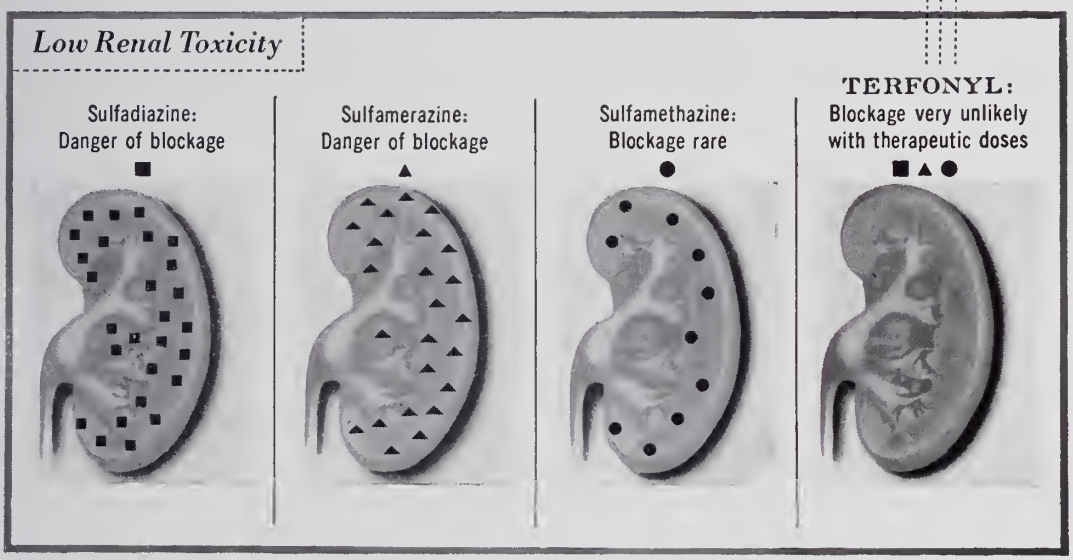

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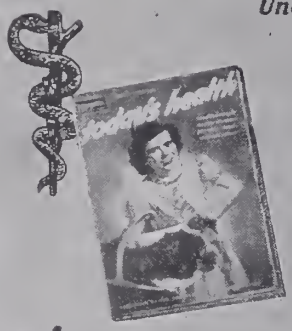

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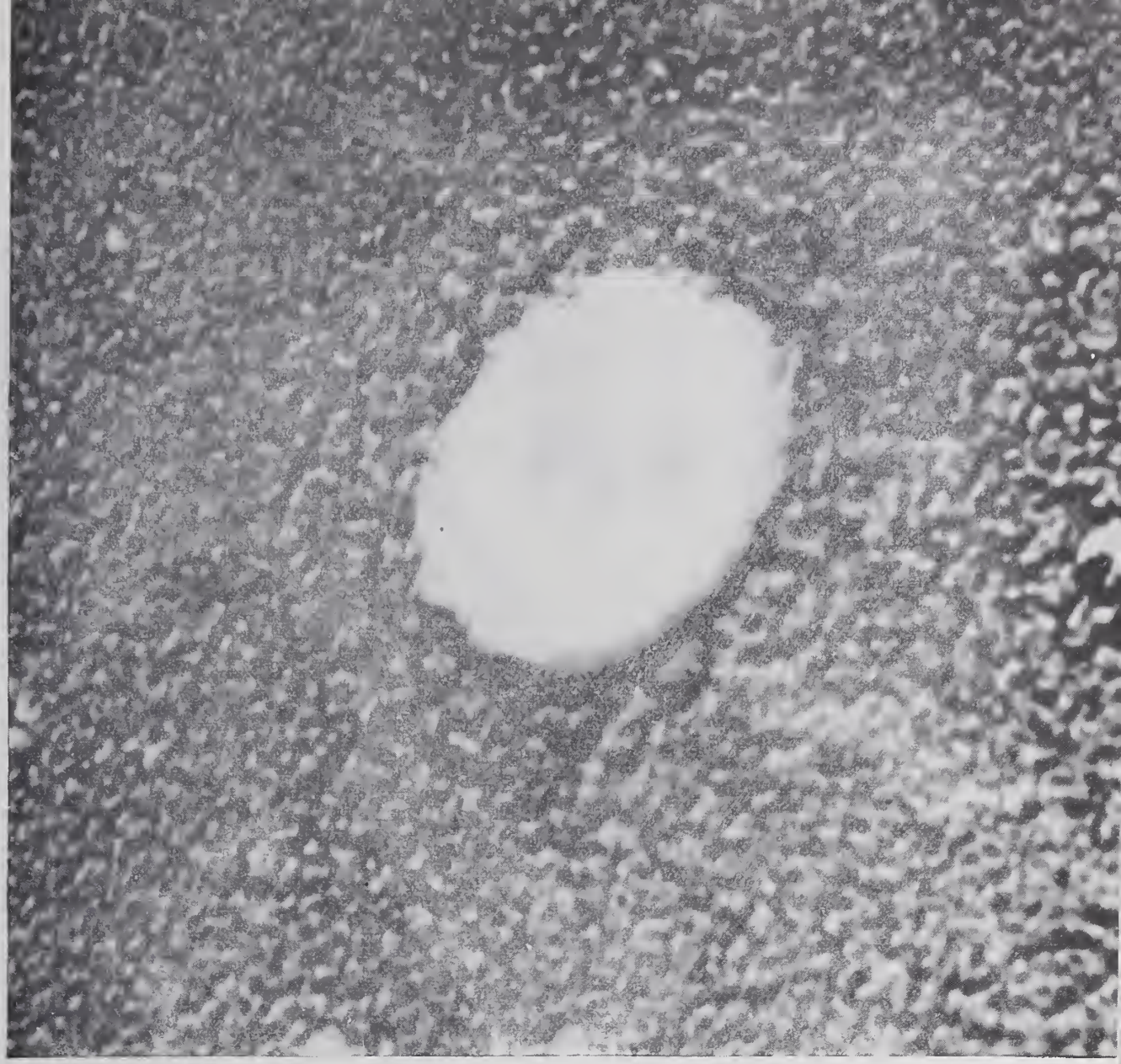

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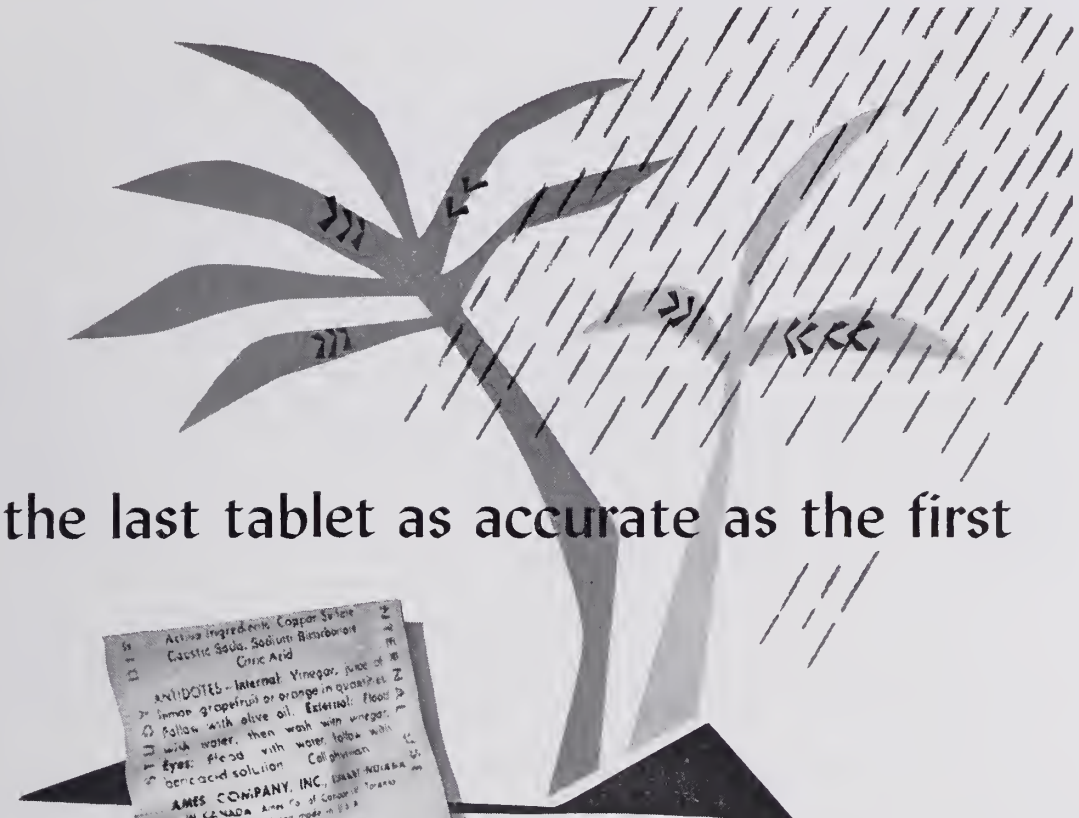

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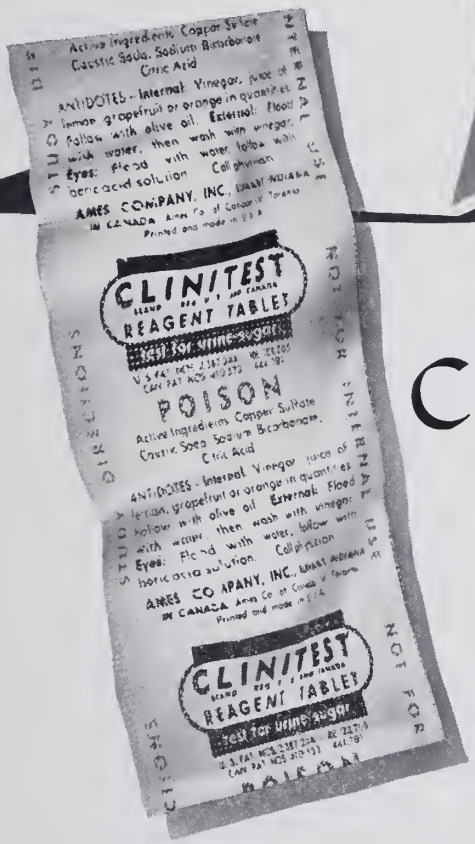

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*Pratt, R., & Dufrenoy, J.: Texas Rep. Biol. & Med. *12*:145, 1954.

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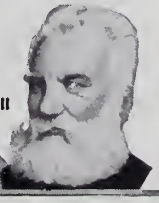

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One of the most noteworthy improvements in the Journal has been the addition to its staff of the department editors pictured on this page. Their work has been most excellent and we would like to join with the editor and the membership of the Kentucky State Medical Association in paying a thankful tribute to them for their effective efforts.

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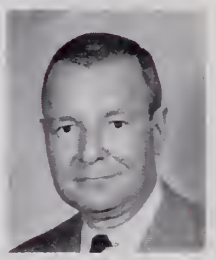

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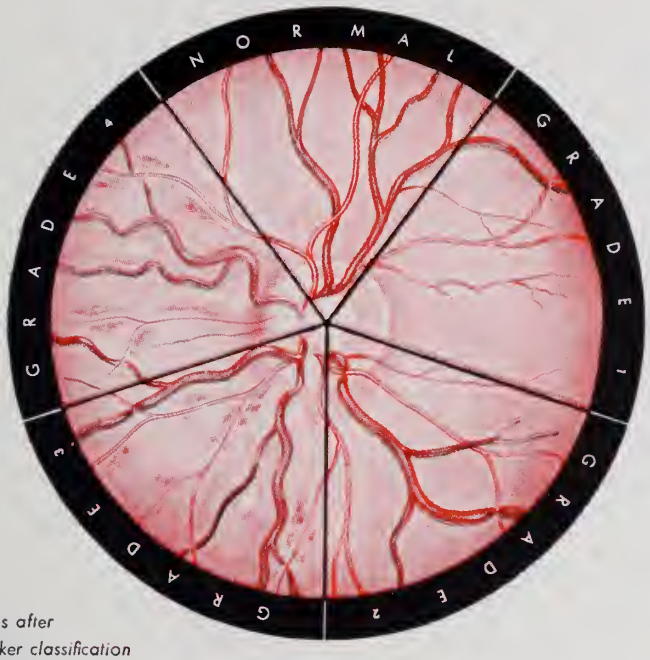

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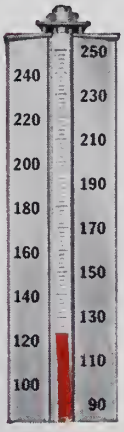

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A CIBA FOUNDATION SYMPOSIUM ON THE KIDNEY, Edited by A. A. G. Lewis, M.D., B.S., B. Sc., M.R.C.P. and G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch.; Little, Brown and Co., Boston, Mass.; 333 pages; Price $6.75

This book embodies an account of the proceedings of an International Symposium on The Kidney arranged by the Ciba Foundation and held in London, July, 1953. The Ciba Foundation is an educational and scientific charity which provides an International Center where workers active in Medical Research are encouraged to meet informally to exchange ideas and information.

The material covered at this Symposium dealt largely with the physiological aspects of renal disease. Particular attention was paid to structural and functional relationships of the kidney, renal regulation of acid base balance and general problems of electrolyte excretion.

The book is to be recommended as a worthwhile addition to a medical library. The physician concerned with clinical care of the patient will be especially interested in chapters concerned with acute renal failure, aspiration biopsy of the kidney, post operative retention of water and sodium, and fluid balance in anuria.

Maurice M. Best, M.D.

SURGICAL TREATMENT OF CANCER OF THE CERVIX, Edited by Joe V. Meigs, M.D., Professor of Gynecology, Harvard Medical School; Grune and Stratton, New York, N. Y.; 462 pages

Since 1878, the evolution of the treatment of cancer of the cervix can be divided into four eras. Namely, Pre-Wertheim era, Wertheim-Schauta era, Radio-therapy, and the modern era (attempt to integrate Radiotherapy and surgery on a rational basis).

This treatise edited by Joe V. Meigs, M. D., the promoter of the modern surgical era, gives us a book that presents in thirteen chapters and an index, the most complete and comprehensive study of the subject to date.

It presents chapters on the anatomy and blood vessels of the pelvis, the lymphatics of the pelvis and the sympathetic and para-sympathetic nerves of the ureters and bladder. Each chapter is written by a known authority on his special subject. After a comprehensive presentation of the theoretical side, it presents three types of abdominal and three types of radical vaginal hysterectomies. Each operation is described in detail and is well illustrated. The five year results of the different procedures are shown and compared in detail.

Different methods of managing advanced cases are presented and the results are compared.

One interested in the treatment of carcinoma of the cervix will want this treatise. It is complete and comprehensive in its presentation. It will assist one in choosing the correct treatment for the varied stages of cancer of the cervix. It will also give one a comprehensive understanding of what to expect from the different forms of treatment.

W. O. Johnson, M. D.

THE PHYSICIAN AND HIS PRACTICE, Edited by Joseph Garland, M.D., Editor, The New England Journal of Medicine; Little, Brown and Co., Boston, Mass.; 270 pages

"The Physician and His Practice" is a collection of factual information covering the history of Medicine. Then it takes up the physician as a citizen, discussing his family and the important role the wife plays in helping to build and maintain their standing in the community. It also brings out that he is accepted as a leader in his community and points out that he must never let his practice take all of his time.

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The type of office training and adaptability of assistants are well described. Many facts about office supplies, furnishings, record keeping accounting and application of law are put down so that one can readily use the material as a source book.

A few contributors bring out that tax-supported laboratories and other facilities should be taken advantage of (this, of course, shows how socialism is creeping into our profession).

Walter B. Martin, M.D., brings out very well the necessity and tells of the many advantages of the young man becoming a member of medical organizations and through them keeping up with the scientific advances and being informed about the legislative and political forces that may affect our way of life.

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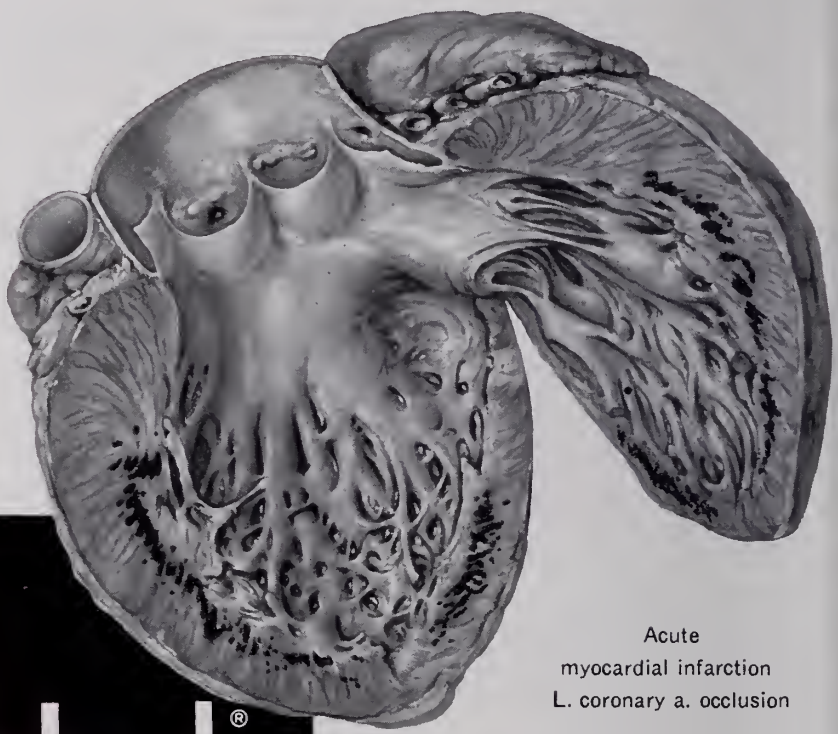

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1. Gazes, P. C., Goldberg, L. I., and Darby, T. D.: *Circulation*, 8: 883, Dec., 1953.

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WASHINGTON NEWS DIGEST

Washington, D. C.—Before Congress, and getting some attention but almost no action, is the Hoover Commission's report on federal medical services. Most controversial question is how much medical care the federal government should give to veterans whose disabilities are not a result of their military service. This is ground that has been well plowed before, by the first Hoover Commission, by various studies and reports and most recently by the AMA's campaign to educate the profession on the non-service-connection situation.

Apathy of Congress may be explained in part by decision of the White House, the week after release of the Commission report, to appoint a commission to inquire into the whole field of veterans' benefits. The group, headed by Gen. Omar Bradley, former VA administrator, is not expected to complete its study until next fall.

A Medical Task Force (14 physicians and one dentist) did most of the spadework for the Hoover Commission. Publication of its report showed that not all the recommendations of the Task Force were accepted by the full Commission. The most notable differences came in veterans' medical care. The Task Force concluded that what is most urgently needed is a firm legal basis for determination of eligibility for medical care. Its solution would be to end eligibility for non-service-connected care three years after separation from service. The Task Force declared that "the very normal incident of fulfilling the duties required of every citizen" should not entitle part of the population to lifelong medical care. The three-year limit, according to the Task Force, would reduce the potential VA patients from 17.5 million to 3 million, at an annual saving of $150 million. The Commission would not go along with this on the theory that "the sentiment of the American people is that a sick and really indigent veteran should be provided care in VA hospitals." Instead it recommended that:

(1) the inability-to-pay statement for non-service care be "subject to verification," (2) a veteran assume an interest-free liability to pay for such care at some future date "if he can do so," (3) the VA close down 20 hospitals, mostly general medical and surgical, (4) outpatient care be furnished indigent veterans with non-service disabilities, and (5) all veterans laws be brought together into a single code.

The American Legion labeled the Hoover Commission recommendations as "heartless," and "unworthy of serious consideration by informed people." Through Secretary and General Manager George F. Lull, the American Medical Association made these points: (1) closer screening of financial statements already has proved to be ineffective, (2) rejecting the Task Force plan for a three-year cutoff while offering outpatient care would skyrocket costs and defeat the commission's goal of eliminating wasteful spending and unnecessary intrusion by the government in private affairs.

The Commission has other equally important, if not as controversial, proposals. Among them are:

Closing down of general medical hospitals of the Public Health Service, elimination of free medical care for merchant seamen, extension of contributory health insurance to military dependents and other U. S. beneficiaries along lines of the proposed program for federal civilian employees, regionalization of military hospitals with one department in command of all hospitals in each area, creation of a Federal Advisory Council of Health with physician and lay members who would advise the President on both governmental and national health problems, and creation of a National Medical Library out of the present Armed Forces Medical Library. Copies of both Commission and Task Force reports are available at the Government Printing Office, Washington 25, D. C.

Secretary Hobby of the Department of HEW, testifying on all the administration's proposals, opened a series of health hearings before the House Interstate and Foreign Commerce Committee. Pressed to make a choice, she indicated that the two most important parts of the six-part omnibus health bill were reinsurance of health plans and federal guarantee of mortgages for health facilities.

But the committee decided that first priority should go to mental health proposals. Accordingly the following week it started hearings on that part of the omnibus bill calling for a 5-year program of grants to states for mental health projects. Also before the committee was the chairman's bill for a national study of mental illness problems, to be financed by the U.S. but conducted by private groups.

Holding priority on the Senate side was legislation for a 5-year, $250 million program for aid to medical schools, sponsored by Chairman Hill of the Labor and Public Welfare Committee.

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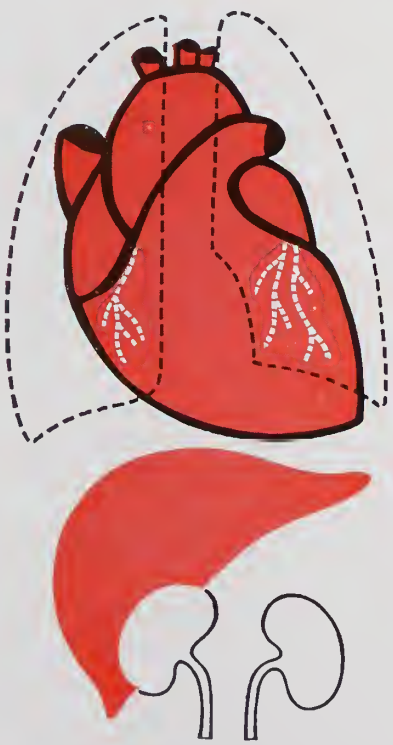

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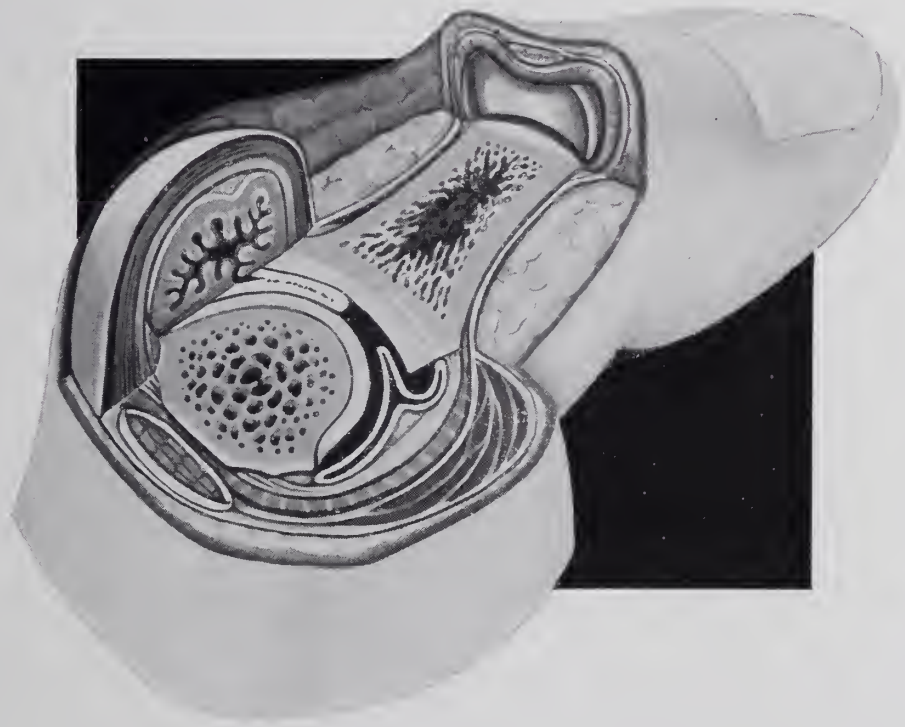
*Bunim, J. J.: Research Activities in Rheumatic Diseases, Pub. Health Rep. *69*:437, 1954.



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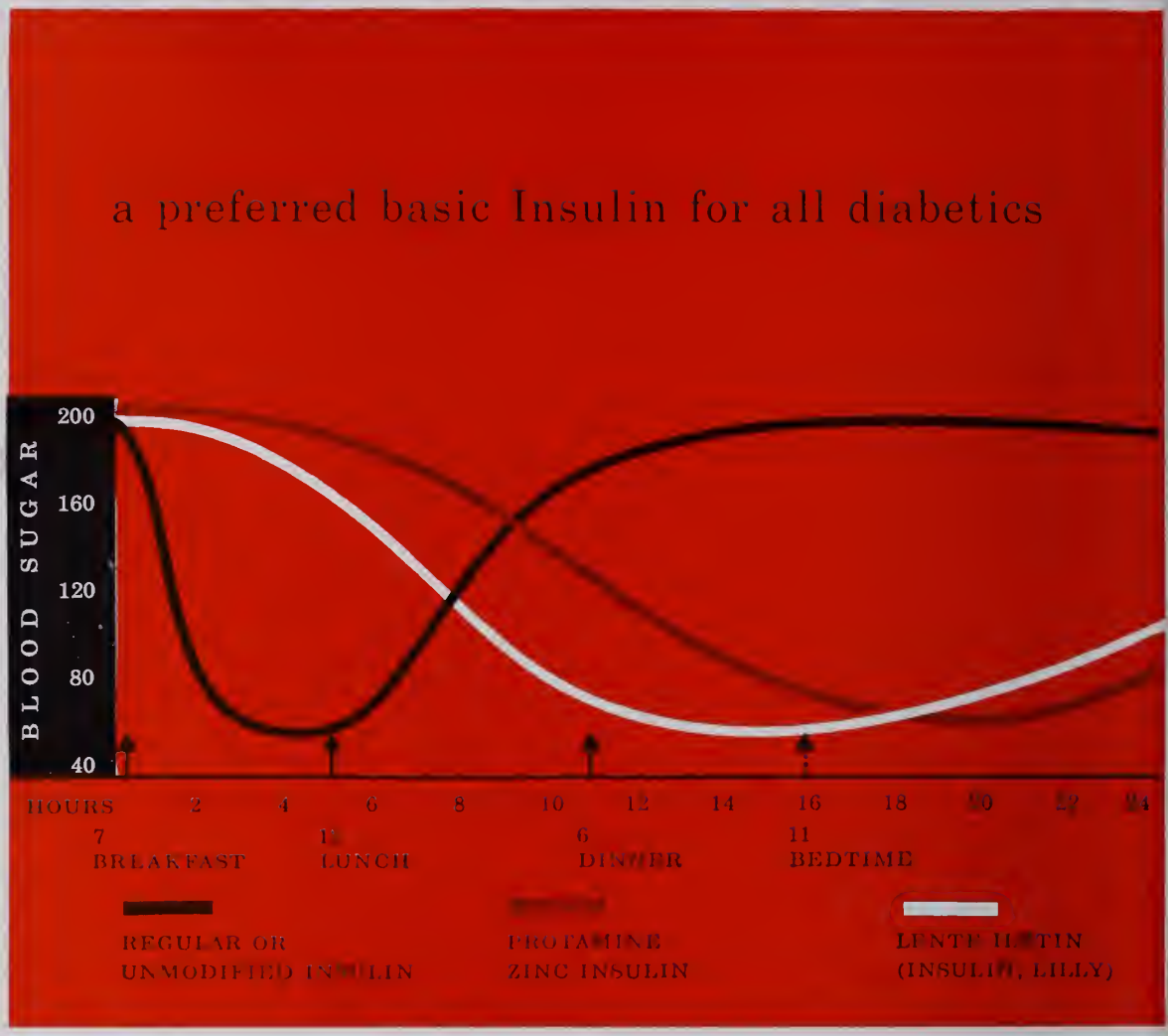

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VOL. 53 APRIL, 1955 NO. 4

Radiogold: Clinical Applications

HAROLD F. BERG, M. D.*
Louisville

Introduction

The use of radioisotopes in medicine, up until recent years, has been primarily an investigational and a research tool. Now we can unequivocally say that several of the isotopes have left the research stage and can be classified as therapeutic drugs which in the proper cases and in trained hands can be expected to produce certain desired results. Radioiodine has been used very successfully in the treatment of diffuse hyperthyroidism and some thyroid carcinomas. Radiogold, though more recent in use and still somewhat of an experimental drug, has now been used for over four years clinically and has already found several definite applications in the surgical field. The popularity of radiogold is increasing very rapidly, and at the present time it is second only to radioiodine in amounts used[1].

Radiogold has several unique properties which make its radiations in certain circumstances better than the radiation of x-ray and radium. Radiogold is primarily a beta emitter isotope and as these rays can penetrate only a few millimeters in depth, the radiation effect is limited to the immediate area of deposition of the isotope. This protects contiguous normal structures from an excessive amount of radiation. Of the total effective radiation, there is also a gamma ray component of radiogold which penetrates very deeply and though it contributes some radiation effect, its primary use is to help ascertain the distribution of the isotope by external counting measures.

Radiogold has a half-life of 2.7 days. This is considered a relatively short half-life for the therapeutic isotopes and is desirable because the effects do not linger. If the situation requires it, multiple instillations of the drug can be administered.

Radiogold can be made into a colloidal solution, and because of the large particle size of this colloid, it can be expected to remain in the vicinity where deposited[2]. Thus, if gold is placed in a cavity such as the peritoneal space, its activity will be confined to this space and it will not diffuse through the peritoneal membrane into the capillaries and then into the general blood circulation. The same will occur in the pleural cavity or from injections directly into a tumor or organ. However, the colloid particles are often phagocytized and delivered by way of the lymphatics to the lymph nodes. This may result in irradiation of the lymph nodes which is often what is desired in overall therapy in situations in which regional metastases are to be irradiated.

Radiogold can be made easily in a radioisotope laboratory. When purchased commercially it is dispensed in a bottle and is shipped in a lead protected carton. The solution can be withdrawn and diluted to any desired amount and administered in various ways, depending upon the effects desired.

The clinical applications of colloidal gold that are being investigated can be divided into three categories: Interstitial, Intracavitary, and Intravenously.

Interstitial Injection

The earliest use of radiogold was by direct injection of the colloid into tumors[3]. Effects similar to that of conventional x-rays were found to have taken place. Investigations have continued through the past five years and several definite ap-

*Department of Surgery, University of Louisville School of Medicine.

proaches to different organs have developed.

PROSTATE. Flocks, Kerr, Elkins and Culp[4] of the University of Iowa first started injecting certain tumors of the prostate gland with radiogold over two years ago and were much impressed with the results. They emphasized that they injected only those prostatic tumors which were beyond the limits of total prostatectomy by reason of invasion beyond the capsule, but had no evidence of distant metastases. In their experience this left a large number of cases which could be treated with radiogold. The method consists of exposing the prostate gland both retropubically and suprapubically, and, with the gland in full view, radiogold is injected into the gland, approximately 1mc. per gram of estimated weight. In the larger glands one-half mc. per gram of tissue is delivered. Radiogold is also injected into the seminal vesicles. Their patients showed a prompt and rapid decrease in the size of the tumor by the third week after radiation. Microscopic studies of specimens taken by needle biopsies and at subsequent operations have shown marked and extensive necrosis or fibrosis of the tumor with radiation changes in a large number of cases. In a few cases secondary or tertiary injections transperineally were required. Certain complications such as rectal scarring, strictures, or ulceration have occurred occasionally but have never been serious, and with further development of the technique these men feel that the complications are decreasing.

CERVIX. Allen, Sherman, and Bonebrake[5,6], of Washington University, have been injecting radiogold into the parametrial tissues in the treatment of carcinomas of the cervix. They summarize their method as follows: Radiogold is injected by needle directly into both parametria, the average dose being 50 to 70 mc. into each area, the total being 100 to 150 mc. The solution volume was 35 cc. and 2% of pectin is added to aid retention. Full or partial radium dosage follows, depending on whether or not an operation is to be performed. Radical hysterectomy with lymph node dissection is then performed 18 to 30 days after the injection of gold, which provides opportunity to secure lymph node and other biopsy specimens for study of gold distribution, radiation and tumor effects. While the ultimate results cannot be evaluated as yet, they are nevertheless encouraging. The gold particles have been shown to be promptly phagocytosized and carried by way of the lymphatic system to the regional lymph nodes. Maximal radiation is found in the nodes within 24 hours. These men have shown that they can deliver a greater amount of irradiation to the lateral parametrial regional lymphatics than can be accomplished by usual x-ray or intracavitary radium techniques. They report that marked radiation changes were observed in the tissues and evidence of cancerocidal effects was noted. Complications have been very few, consisting largely of discomfort arising from the pelvis. They feel that a substantial increase of survivors from cancer of the uterine cervix can be expected from the use of radiogold.

ACCESSIBLE RADIOSENSITIVE SOFT PART TUMORS. Radioactive gold has also been injected into other tumors of the body and subcutaneous lymph nodes with variable results. Experimentally, in our own laboratories at the University of Louisville, Berg and Christophersen[7] have been injecting radiogold into the breasts of dogs, and have noted distribution studies and concentration of the gold. These studies are very encouraging in that the regional lymph nodes, mainly the axillary and the internal mammary chain, picked up gold within 24 hours. The effects on the lymph nodes, even with small doses, were those of marked radiation changes such as loss of component cells and structure of the nodes. This certainly suggests a clinical application either in the inoperable or post-operative carcinomas of the breast in an effort to deliver radiation to the lymph nodes which are inaccessible surgically. Berg, Bryant and Christophersen[8] have also been able to localize activity in the regional hilar lymph nodes of the lung of dogs. A high concentration of activity was obtained in these lymph nodes by injecting gold into the mucosa of a bronchus or the distal tracheal region, or by instilling gold directly into one of the terminal bronchioles. Also in our laboratories, Berg, Isaacs and Christophersen[9] have been able to irradiate the regional lymph nodes of the urinary bladder of dogs by injecting gold into the wall of the bladder. Human clinical applications of these methods have been carried out to limited extent at this time.

Intracavitary Method

PERITONEAL. In 1947 Hahn first injected gold intraperitoneally in animals and noticed that the gold remained in the peritoneal cavity[3]. This was put to use clinically by Dr. Mueller[10] shortly afterwards.

Radiogold, in certain selected cases of carcinomatosis, can be placed into the peritoneal cavity in doses varying from 75 to 150 mc. at a time and repeated as often as necessary to obtain the desired effects. Andrews, Root, Kerman and Bigelow[11] reported that in over 50% of their treated patients there was a reduction in the amount of ascitic fluid that had reformed in the peritoneal cavity, and this eliminated the necessity of frequent peritoneal tappings and the inconvenience and complications of x-ray therapy. Improvement is seen in the disappearance of the malignant cells in fluid aspirated from the peritoneal cavity. The greatest benefits have been in carcinomatosis of ovarian origin[12,13]. Complications are very few and most investigators feel that intraperitoneal use of colloidal gold should be accepted as a valid therapeutic procedure. Most of the earlier cases that were treated with this method were far advanced, almost terminal cases. As we use this earlier in the progression of the disease, we should expect even better results.

Pleural. Intracavitary gold in the pleural space has been used in pleural effusions secondary to pulmonary carcinomatosis. Again, the lessening of amount and rapidity of the formation of fluid has been very noticeable in many cases. An adhesive pleuritis is apparently accomplished as a result of the radiation, and the pleural cavity is often obliterated.

Recent work indicates that many investigators are beginning to use gold earlier, and possibly its greatest value lies in its prophylactic use. Prophylactic use consists primarily of placing gold into a pleural or peritoneal cavity, not in the hopeless cases, but in those in which a primary, usually a single tumor, has been removed, and when there still is anticipation that seeding will take place. Thus, after removal of a lung for carcinoma, even though it is thought at that time that a complete removal of carcinoma has been accomplished, past experiences of recurrences suggest that a prophylactic deposition of radiogold in the pleural space may be of great value. Similarly, in the removal of an ovarian carcinoma, even without spillage, the question of seeding might still be present, and prophylactic use of gold in the peritoneal cavity should be of great value. Certainly, if there is knowledge of spillage during an operative procedure, one should not hesitate to instill radiogold. If the radiogold is not immediately available, a polyethylene tube can be inserted into the proper cavity during the operative closure. When the gold is obtained it can then be instilled through this tube, obviating a paracentesis or thoracentesis.

Intravenous

When radiogold is injected intravenously the final deposition is almost entirely in the reticulo-endothelial system. Because of this, it was thought that diseases of this system, such as the lymphomas, Hodgkins, leukemias and hepatic tumors, would respond beneficially. This, unfortunately, has not been the result in all cases. Hahn[14] reports that he has used gold in the treatment of chronic myelogenous and lymphogenous leukemias. He states that a dose of 0.5 to 1.0 mc/Kg will almost always result in a satisfactory remission ranging from four to six months and occasionally up to two years.

The efforts to irradiate hepatic tumors were unsuccessful. After intravenous administration of radiogold a tremendous concentration of activity was found in the liver and the capsule of the tumor, but no penetration or pickup could be found in the tumor itself.

Summary and Conclusions

1. Radiogold has been used clinically for over four years and is now an accepted form of therapy in certain types of advanced cancer.

2. Intrapleural and intraperitoneal instillations have relieved many patients with carcinomatosis of fluid reformation and has eliminated multiple tappings.

3. Interstitial injections into the prostate gland for carcinoma of the prostate and the parametrial region for carcinoma of the cervix shows much promise.

4. Methods of administration to other organs are being investigated.

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Allergy In Infancy And Childhood*

MAURICE KAUFMANN, M.D.

Lexington

This paper is presented in the hope of awakening and stimulating the pediatrician and the general practitioner to an awareness of the importance of allergic diseases, particularly in infancy and early childhood. The specialty of allergy has made such rapid progress in the past few years that the average practitioner has found it difficult, if not impossible, to keep pace. Consequently, there are many misconceptions concerning problems in allergy and this discussion will touch upon some of the phases regarding the incidence, prophylaxis, pathogenesis, recognition and management of allergic diseases.

The maladies which are acknowledged to result from hypersensitiveness have come to occupy a large segment of medical practice, specifically in pediatrics, dermatology, neuro-psychiatry, otolaryngology, internal medicine and general practice. Outside of the profession, the word "allergy" has been popularized to the extent that it has all but lost its original medical meaning. In fact, there are many physicians who believe that allergy is just an "idea" or notion on the part of the allergic person, and that the patient is a type of malingerer. The discoveries of such agents as the antihistamines and the adrenocorticotropic hormones have helped, to some extent, to heighten general allergy consciousness. Yet all this publicity has failed to arouse, sufficiently, the scientific curiosity of the non-allergist to send him in search of additional information about this complex subject. In a recent editorial, Rogers (1954) wrote "To those of us who have been working in this field for the past 20 years and have viewed the field of allergy with an honest and broad-minded approach, it is very difficult to understand the antagonistic attitude that exists in the minds and practices of a great many physicians. True, the majority of physicians practicing now have had absolutely no instruction in allergic diseases. The younger men have had a very limited instruction as students—in some medical schools, none at all—so that knowledge of this subject can be gained only on a post-graduate basis."

Perhaps one of the most dangerous misconceptions of allergy, especially in children, is that they will "outgrow" their allergy. Unfortunately, in many cases, nothing could be further from the truth. Such an attitude can serve only to lull the parent into a false sense of security, which frequently turns into bitterness and mistrust towards the profession, when the child fails to get well or, worse yet, develops serious complications. It is generally accepted, at least by allergists, that an atopic individual will never completely "outgrow" his constitutional tendency to react, particularly, if he is exposed to an allergenic environment. Spontaneous remissions may occur upon the accidental removal or avoidance of the exciting allergen or allergens, but the basic immunologic susceptibility or predisposition will remain. Peshkin (1934) pointed out that "children who are given the benefit of rational modern therapy overcome their asthma (allergy) much sooner and more satisfactorily than those who are consigned to the fate of 'waiting and hoping'. Meantime, some of the serious well-known complications may supervene and thereby considerably diminish the chances the child has of becoming relieved of asthma."

Incidence

There are almost 4,000,000 sufferers from asthma and hay fever in this country, thus ranking these two diseases as third in prevalence among chronic diseases in the United States. According to official estimates there are also more than 3,000,000 other sufferers from allergic diseases among those afflicted with chronic

*Presented at the Annual Meeting of the Kentucky State Medical Association, Louisville, Kentucky, September 21-23, 1954.

bronchitis, sinusitis, chronic eczema, industrial dermatitis, poison ivy, drug sensitivities and connective tissue diseases. Asthma alone is responsible for more than 10,000 deaths in the United States each year, according to a statistical report put out by the National Institute of Health, U. S. Public Health Service. These figures are very significant when it is realized that approximately 80 per cent of the patients in this country are cared for by general practitioners.

Halpern (1952) observed that "the incidence of allergy encountered in routine pediatric practice is considerably higher than that stated in the textbooks by allergists, due to the fact that the allergist sees only the more severe cases and that most such specialists restrict themselves entirely to allergic diseases." Most textbooks of allergy estimate that about 10 per cent of the general population have a major allergy and another 40 per cent a so-called minor allergy. A recent study by Siegal and Seideman (1954) up these figures and according to their study "it would appear that the total incidence of atopy in the general population is about 20 per cent, two-thirds being in the clinical phase and one-third in the latent phase." Cooke (1947) states that "practically all human beings are capable of becoming sensitized to certain antigenic substances under certain circumstances and special conditions. If one were to include the cases of ivy dermatitis and all that miscellaneous group which are today being diagnosed as allergies—allergic headache, allergic arthropathy, gastro-intestinal allergy, allergic fever, together with the allergic evidence of infectious disease, as the rash of scarlet fever and certain lesions of tuberculosis, to mention but a few—these together with the recognized and accepted diseases of allergy would of course make the incidence of allergy very high. The dilemma of what to include is not an easy one to solve."

Prophylaxis

The prevention of allergy may actually begin during intrauterine life, in fact, before conception occurs. However, from a practical standpoint, it is very doubtful that allergic prospective parents would heed any suggestion to prevent conception. Most allergists believe that the predisposition or tendency to be allergic is inherited and that the inheritance is in accordance with the Mendelian law. Vaughn (1939) has summarized and evaluated the statistical data on studies concerned with the heredity of allergy and his figures, as well as those of Shulman (1948), indicate that 75 per cent of all children with bilateral, and 50 per cent of these with unilateral allergic inheritance, eventually develop clinical allergy. A gravid woman who is allergic and whose husband is allergic, should be warned of the implications and risks involved. Nor should her obstetrician and pediatrician fail to be cognizant of this possibility. Shulman (1948) observed that "the pediatrician holds a unique position in the field of allergy. To him falls the opportunity of dealing with the patient before the first manifestations of allergy. Therefore, whatever can be achieved in the way of preventive allergy lies within his sphere." But it is here that the first act of omission is frequently committed. The expectant mother, especially the rare one who plans to breast feed her infant, either is ill advised or feels she must consume extraordinary quantities of milk. If, for example, she has been instructed to drink one quart of milk daily, she may in her zeal to insure a plenteous future supply of breast milk, ingest two or more quarts. This and other dietary indiscretions may stimulate the fetus to develop excess reaginic antibodies against the onslaught of potent food allergens. Rubin (1947) in his discussion concerning the pathogenesis of the allergic state says that "Probably the most important single factor in the development of clinical allergy is the inherited capacity to be sensitized allergically to foreign substances. The inherited quality is not sensitivity to a specific substance, but simply the ability to develop an allergic type of sensitization." He points out further that "Active sensitization, which may be permanent, can also be induced by the ingestion of breast milk which contains the foreign antigen excreted into it. Since it is known that the overindulgence in certain, and especially uncommon, foods floods the circulation with antigen, it might be wise in known allergic families for the pregnant or nursing woman to refrain from overindulgence in an effort to spare the child this specific sensitization".

If, for some reason, the prophylactic phase of allergy has been neglected or disregarded, the potentially allergic infant can yet be protected, provided the parents and the attending physician have the desire to embark upon a program necessary to accomplish this end. Perhaps the first bulwark against the development of allergies is diet control. The principles of dietary management, including the nutri-

tional and emotional significance of food to the infant, should be explained painstakingly to the parents. They should, for example, be informed that protein can be supplied in foods other than cow's milk, eggs, wheat and other highly allergenic foods. Routine inquiry to ascertain a family history of allergy should be made and if positive, the physician must be on guard to anticipate and recognize any sign of an allergenic reaction. When cow's milk is to be used in the formula, it may be preferable to modify it by heat or acidification, or both. Boiling the milk renders it less allergic and acidification enhances its digestibility. Feedings should be introduced in small quantities at the beginning and increased as needed. Feedings should not be forced in order to prevent the newborn's physiological weight loss, nor should any attempt be made to reach a positive nitrogen balance during the first week of life. Smith (1946) in discussing the assimilation and metabolism of specific food substances in the neonatal period, states that it has been shown by experimental studies regarding proteins, that a positive nitrogen balance is normally obtained by the end of the first week. In the allergic infant, forcing the protein intake is quite hazardous and unnecessary. If any signs or symptoms of disturbance from the ingestion of cow's milk develop, another source of protein must be provided. Fortunately, this no longer is a problem today with all the excellent commercial milk substitutes readily available. Glaser and Johnstone (1953) feel there is a distinct advantage in substituting a different protein food in allergic infants from the beginning. They state that "Along with cow's milk, certain other foods such as eggs, beef (closely related chemically and immunologically to cow's milk), and wheat should also be withheld from the diet of a potentially allergic infant until after the period of immunologic immaturity has passed." Experience has shown that orange juice and natural fish liver oil also are notorious food offenders, but here again, they can be replaced by synthetic vitamin preparations. As the infant grows and requires more food, a good rule of thumb is: never introduce more than one new or different food at a time; never closer than one new food a week; and always begin with small quantities. In the allergic infant, the older he is before a variety of new foods are added, the better. These principles bear out the concepts discussed and give credence to the fact that the tendency towards sensitization is enhanced, in susceptible infants, by the passage of unsplit proteins through the more permeable gastro-enteric mucous membrane in the early months of life.

Another important consideration in the anti-allergic program is environment control. This is the avoidance or removal of all highly allergenic contactants and inhalants. This phase of the management can accomplish a great deal prophylactically for the pre-allergic child. Regarding contactants, the use of soap substitutes, the avoidance of scented or adulterated baby oils, the avoidance of wool clothing, proper diaper care, strict attention to cradle cap, and the institution of other indicated measures may prevent the development of various forms of dermatitis. The pre-allergic infant or child should be protected from exposure to potent inhalant allergens such as house dust, animal danders and emanations, mold spores and pollens. His bedroom should receive special attention because it contains many potent allergens, because this room can be controlled better than any other and because the child will spend at least one third or more of his life in it. All rugs and overstuffed furniture must be removed; all bedding, especially the pillows and mattress, must be encased in plastic or other suitable material; pets or stuffed toys must not be permitted in the room; the registers and windows must be kept closed; and other necessary measures to insure an hygienic, allergy-free bedroom. Since the allergic child is prone to run a chronic course from respiratory infections and because these infections often usher in the first asthmatic attack, every precaution should be taken to avoid exposure to the common cold or other respiratory diseases. Immunization against variola and pertussis should be performed before three to six months of age, if possible. Vaccination is contraindicated if eczema develops, and whooping cough frequently initiates bronchial asthma. Gamma globulin, antibiotics and chemotherapeutic agents, judiciously used, may prevent serious sequelae in the hypersensitive patient who has acquired an acute respiratory disease. Common sense and an intelligent attitude on the part of the parents concerning precautionary measures, such as protecting the child against exposure to inclement weather, house dust, furry and stuffed animals and other highly allergenic substances, will prove well worth the effort.

Pathogenesis

Hypersensitivity phenomena in the pediatric age group are basically the same as those which occur in the adult. However, the responses of infants and children to allergenic stimuli often are manifested differently. Though the young organism is anatomically similar to the adult, he is physiologically immature, and his homeostatic faculties frequently operate at a reflex level. This is readily observed, for example, in the "purposeless" sneezing or the development of infantile hives in many newborns. The structures and mechanisms involved in the pathogenesis of hypersensitiveness function crudely during the early years of life. It is therefore evident, that the infant or child cannot cope with an hostile environment as resourcefully as his older sibling or parents, hence, the approach to the problems of pediatric allergy requires special consideration.

Ratner (1951) asserted that "The acquisition of hypersensitiveness therefore depends upon: (1) constitutional or other factors peculiar to the individual, (2) the nature of the exciting substance, (3) the amount of antigen to which the individual is exposed, (4) the amount of native antigen which actually invades the blood stream, (5) the intervals at which such exposures occur." It also should be noted that the allergic (antigen-antibody) reaction occurs at the site of sessile antibodies (reagins) in the susceptible sensitized tissue which is commonly referred to as the "shock" tissue or organ. A priori, the particular tissue or organ involved or affected accounts for the resulting allergic manifestation.

Recognition of Allergic Conditions

The diagnosis of obvious allergies such as atopic eczema, allergic coryza, seasonal and perennial asthma, urticaria and angioedema, ordinarily is quite elementary. But by the time allergic manifestations become so evident, the problem of treatment is not always so simple and the prognosis may not be too encouraging. An awareness of, and the ability to recognize the early signs and symptoms of the allergic diathesis, will lead to the initiation of prompt and proper measures by the attending physician which may preclude a more serious, costly and complicated sequel. Some of the signs warning that one may be confronting an allergic condition include chronicity, periodicity and seasonal incidence, particularly if these signs and symptoms implicate the so-called allergic "shock" tissues.

The following conditions are ordinarily or quite frequently due to allergy. Unless or until some other specific etiology can be demonstrated, they should be considered and treated as being allergic in origin. They are herewith listed in the approximate chronological order of appearance.

Fetal:

1. Hiccough-in-utero
2. Hyperactive fetal movement

Neonatal and Infancy

Skin:

1. Infantile hives (nettle rash)
2. Infantile eczema (atopic eczema)
3. Contact dermatitis
4. Scleredema (sclerema)

Gastro-Intestinal:

1. Pylorospasm
2. Regurgitation (recurrent)
3. Gastroenterospasm (colic)
4. Diarrhea (non-specific, mucus stools)
5. Constipation (spastic colitis)
6. Geographic tongue
7. Anorexia

Respiratory:

1. Sniffles (non-specific, chronic-recurrent)
2. Nasal stuffiness with or without sneezing barrages
3. "Colds" (chronic-recurrent)
4. Rhinitis (seasonal and perennial coryza)
5. Otitis (non-specific, chronic-recurrent)
6. Rhonchi (excessive mucus, chronic-recurrent)
7. Croup (non-specific, recurrent)
8. Bronchitis (non-specific, chronic-recurrent)
9. Cough (non-specific, chronic-recurrent)
10. Bronchial asthma (seasonal and perennial)

Miscellaneous:

1. Erythroblastosis foetalis
2. Glossitis
3. Conjunctivitis (seasonal and perennial, non-specific)
4. Convulsions (non-specific, afebrile)
5. Allergic "toxemia" (apathetic-listless-cyanotic)
6. Restless sleepers, hyperactive, "unhappy all the time," and vasomotor instability (pale-pink skin)

Preschool (2 to 5 Year)—Includes many of the preceding conditions, plus:

1. Urticaria of various types

2. Dermatitis venenata
3. Drug eruptions
4. Prurigo
5. Hydroa Aestivale (recurrent summer eruption)
6. Purpura (non-thrombocytopenic, Henoch's, Schonlein's)
7. Allergic rhinitis (seasonal and perennial)
8. Allergic sinusitis (seasonal and perennial)
9. Recurrent herpes simplex
10. Cyclic or periodic vomiting
11. Mucus colitis
12. Increased psychomotor activity
13. Epileptiform-like seizures
14. Celiac syndrome

School Age to Puberty—Includes many of the preceding conditions, plus:

1. Neurodermatitis
2. Erythema multiforme and nodosum
3. Dermatitis herpetiformis (Duhring's disease)
4. Angioedema (with or without urticaria)
5. Pruritis ani and vulvae
6. Recurrent furunculosis and hordeolum
7. Serum sickness (anaphylactoid reactions)
8. Collagen diseases
9. Vaginitis (pollenosis)
10. Cystitis
11. Ulcerative and aphthous stomatitis
12. Ulcerative colitis
13. Regional ileitis
14. Migraine (variants and equivalents)
15. Allergic headache
16. Chronic fatigue, emotional and behavior problems
17. Malnutrition and development defects (from chronic asthma and mouth breathing)
18. Deafness, impaired hearing and labyrinthitis
19. Periodic fever
20. Rheumatic fever
21. Loeffler's syndrome
22. Nephritis
23. Vernal catarrh

Admittedly, this is a rather long, formidable and arbitrary number of allergic maladies, and though one may take exception to some of these, it is debatable whether any should be permanently removed from the list. In fact, there are probably one or two others which inadvertently were overlooked. On the other hand, not all of the above conditions are strictly antigen-antibody manifestations, some only fringe on hypersensitivity, and a few others are ill-defined in the early stages. As the infant grows older, the subsequent development of an overt allergic manifestation confirms the original suspicion or impression that one had been dealing with an allergic disease.

Laboratory Aids

A laboratory finding that will aid in the diagnosis of allergy is an increase in the number of eosinophils in the blood, sputum, nasal and paranasal sinus secretions, eye and ear discharges, mucus from the gastrointestinal tract, and secretions or excretions from any other suspected tissue or organ. The examination of such specimens for eosinophilia can be performed with a minimum of equipment. A microscope, proper staining material and slides are all that are necessary. Wright's, methylene blue, or Giemsa's stain may be used. Hansel (1936) described a staining technique which clearly demonstrates eosinophilic granules when they are present. Sheldon, Lovell and Matthews (1953) describe a number of other staining techniques which can be used for this purpose. In our laboratory, we first place the suspected secretion or discharge on a glass slide and allow it to dry in the air, preferably overnight. We then flood the slide with 0.05% eosin for 60 to 90 seconds; dilute with an equal amount of distilled water and allow to stand 60 seconds; completely wash with distilled water; add 1.0% methylene blue and allow to stand for 15 seconds; dilute with equal quantity of distilled water and allow to stand 30 seconds; completely wash with distilled water; allow to dry in the air; then examine under oil immersion.

In certain instances, special methods for obtaining the specimen will enhance the value of the smear, by removing foreign or extraneous matter. For example, if the child is old enough to blow his nose, he should do so on cellophane sheeting or wax paper. Then the sero-mucoid discharge can be transferred to the slide by inverting it over the slide so that the material will cling to the glass, then it is gently teased away from the sheeting or paper. The use of a cotton applicator should be avoided, if possible, because it has a tendency to fracture the cell membrane of the eosinophil and cause the eosinophilic granules to disperse as the material is rubbed onto the slide. Nance (1948), and Rosenblum and Rosenblum (1952) describe a technique for demonstrating the presence of eosinophils in the

stool when gastrointestinal allergy is suspected. The object is to obtain the mucoid portion of the stool with as little fecal contamination as possible. A peripheral blood eosinophilia, as revealed by a differential white blood count, though not pathognomonic, is significant, and an allergic condition should be contemplated until determined otherwise.

Management

When an ailment in the infant or child has been verified as an allergy, dynamic and specific measures should be instituted to alleviate it. Not every allergic child will eventually develop asthma, but every allergic child is potentially asthmatic. Irrespective of possible subsequent allergic difficulties, contemporary hypersensitiveness should not be neglected. Criep (1953) commented that "As a rule, in spite of wishful thinking and endless and harmful temporizing, if untreated the allergic child continues to suffer. Extension of the allergic symptoms over long periods of time affects the child's growth, health, and personality." The proper managment of allergic problems requires orientation with regard to fundamental mechanism applicable in the pathogenesis, recognition and treatment of these disorders. First, all possible allergenic offenders should be sought out by thorough history taking, diet trial, environment control, skin tests and any other essential investigative procedure; second, all proved or suspected allergens should either be avoided or removed from the environment; and third, should avoidance or removal of the allergen alone fail to relieve the condition, these measures must then be supplemented or complemented by specific hyposensitization, appropriate diet control, allergy free environment, and other indicated symptomatic and supportive therapy. It is pertinent at this time to emphasize the fact that there is no intention or implication that every allergic individual should be seen and studied by an allergist. However, if after a reasonable period of time the patient fails to respond to symptomatic therapy alone, then specific methods and other necessary procedures with which the allergist is more familiar and experienced, should be instituted. Furthermore, if the patient is receiving specific hyposensitization and fails to obtain relief, it does not necessarily indicate imperfection of this immunologic procedure. Failure is frequently due to lack of complete cooperation by the patient to avoid overwhelming exposures to the etiologic allergen and contributing allergens to which he may be sensitive. The benefits obtained from appropriate allergic management, if properly carried out, are indisputable; to neglect or to ignore this fact is lamentable, for it will, in many cases, prove calamitous to the patient.

Before concluding this discussion some comments regarding skin testing are in order. There seems to be a rather widespread misconception concerning this particular procedure. Contrary to popular impression, there is more to allergy than the mere testing of the skin and the administration of extract which contains the positive reacting substances. This myth or idea has gained such universal acceptance that almost every patient who consults an allergist expects to come away with a "magic" vial of extract, which eventually will end all of his allergic symptoms. This notion is, of course, absurd. If the specialty of allergy encompassed nothing more than skin testing, as many laymen and some physicians believe, then any doctor need only purchase a commercial set of antigens and become a "needle pusher." Many a physician who has succumbed to such reasoning has come to realize, to his and the patient's sorrow, that the diagnosis and management of allergies is often a most difficult, time consuming, frustrating and disappointing task.

Skin and allied tests to determine the presence of reagins are, basically, clinicolaboratory procedures. In general, skin tests have three main purposes: (1) to corroborate sensitivity to specific allergens elicited from the history; (2) to determine sensitivities not suspected from the history; and, (3) to obtain an estimate of the degree of sensitivity as a guide for hyposensitization. A positive skin test only indicates the presence of skin sensitizing antibodies (reagins) which signifies past, present or future potential clinical sensitiveness. It is the correct interpretation and the proper utilization of these tests, based upon a thorough understanding of the underlying allergic and immunologic mechanism, plus the correlation and evaluation of all the facts and data gleaned from the study of the case, which determine which approach the allergist will employ in the management of the case. When skin testing is practiced, it should not be done haphazardly; the tests should be comprehensive enough to include all possible allergic offenders which may contribute to the etiology of the disease.

Finally, as Rogers (1954) so aptly put

it, "Cooperation, broad-mindedness and an honest approach to these problems (allergy) will lead to a vast improvement in the treatment of many of these conditions. It is conceded that, at the present time, 10 per cent of the populace is seeking relief from allergic diseases. If this is true—and there are not many who dispute it—then it behooves all of us to learn as much as we can about the diagnosis and treatment of allergic diseases and to do the proper thing about it."

Summary and Conclusion

This paper has attempted to highlight certain aspects of allergy, particularly as they apply to infants and children. Diseases of allergy and related conditions are increasing, yet this fact has not significantly motivated the non-allergist to adopt a more dynamic attitude in his approach to the prevention, recognition and treatment of allergies. This paper, therefore, is a plea, if you will, to arouse a keener insight, an inquisitiveness, and an untiring search to ferret out cases of allergy in the early years of life so that the allergic child may be spared years of discomfort, and the development of chronicity or irreversible changes.

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Further Experiences with Induced Hypotension During Surgical Procedures*

CURTISS B. HICKCOX, M.D.**
and
JAMES M. McCORMICK, M.B.**

Hartford, Connecticut

A year ago at the annual meeting of the American Medical Association, members of our Department at Hartford Hospital reported on the use of Hexamethonium salts in producing controlled hypotension during orthopedic surgery (1). Since that time our experience has expanded and procedures in general surgery and neurosurgery have been successfully completed using either a methonium compound or a newer agent with the proprietary name of Arfonad. As one reads the current medical journals of several countries other than the United States it is soon apparent that many technics and drugs are being tried on patients undergoing major surgical procedures in which the state of "controlled hypotension", "hypothermia" or "artificial hibernation" is described. Confusion exists a priori in the definition of fundamental terms and claims have been made which border on the fantastic. British and French writers recently have reviewed the claims (2,3) and have clarified for many, doubts which have arisen concerning the desirability and safety of the methods described. A new frontier has arisen on which many anesthesiologists have been found sharing enthusiasm with surgical colleagues yet viewing with awe the physiologic trespass of metabolism, respiration and circulation produced in sincere efforts to perfect surgical technics which were considered impractical or impossible less than ten years ago.

Methods of Producing Hypotension

In 1946 Gardner in the United States described his experiences with Hale and others at the Cleveland Clinic (4) in producing "controlled induced hypotension by arteriotomy". Some amongst us saw

*Read before the Kentucky Society of Anesthesiologists at the Annual Meeting of the Kentucky State Medical Association, Louisville, Kentucky, September 21-23, 1954.

**Department of Anesthesiology, Hartford Hospital

this challenging exhibit at the A. M. A. meeting in Atlantic City at which the title listed above was changed each day as a result of medical public opinion until only the word "hypotension" survived. As a result of this work Griffiths and Gillies of Edinburgh postulated (5) and proved within two years that high spinal block in the presence of general anesthesia produced paralysis of vasoconstrictor fibers and a level of hypotension which eliminated troublesome bleeding. In the search for relaxant drugs better than curare, methonium compounds were investigated in England (6) and proved to be active autonomic blocking agents which led to vasoconstrictor paralysis with consequent arteriolar and venular dilatation, some depression of cardio-vascular reflexes and a fall in blood pressure which could be modified upward or downward by adjusting the posture of the patient. A fourth method (7) of producing hypotension is deep general anesthesia plus posture which was the only recognized method for reducing blood flow in incised tissues prior to the methods mentioned above. Ever since the introduction of chloroform in 1847 it has been noted that bleeding during surgery was decreased and that the blood pressure frequently fell to "so called" shock levels without deleterious results. It was known that chloroform depressed circulatory function from the beginning of its administration, and, through its effects on the heart and vasomotor center produced a steady reduction of cardiac output, arterial pressure, and blood flow. Ether, on the other hand, initially stimulated the sympathetic nervous system and raised cardiac output until a deep plane of anesthesia was reached, thus by skillful application of general anesthesia and position, one could frequently obtain ideal operating conditions but the margin of safety regarding ischemia of the brain, heart, liver or kidneys was unknown and ventilation as we know it today was not augmented by the anesthesiologist. Gillies has written a chapter on Controlled Hypotension in Evans' 1954 edition of Modern Practice in Anaesthesia (8) which is probably the first text to consider this subject. It is his opinion that the simplest and most commonly used method of inducing hypotension is by the use of ganglionic blocking agents. There are at present three compounds which have had clinical trial—methonium (C_6), thiophanium (Arfonad) and pendiomide, of which we have used the first two drugs. The hexamethonium salts have been reported upon previously in a favorable vein but, just as thiopental sodium represented an improvement over sodium amytal and succinylcholine over curare, it is felt by some that Arfonad is a better blocking agent, and that it is safer and more flexible due to its short duration of action. In 1949 Randall described the action of thiophanium derivatives (9) in smaller animals and compared them to tetraethylammonium bromide. Arfonad as a representative and stable drug was more powerful and possessed longer action as a vasodepressor and ganglionic blocking agent than tetraethylammonium bromide. In the animal studies ephedrine or large doses of neostigmine counteracted the depressor blocking action of Arfonad. The drug is not anesthetic nor does it possess muscle relaxing properties. Sarnoff and Nicholson reported in 1953 their observations on the use of Arfonad (10) in humans to produce hypotension during various major surgical procedures in which hemorrhage was expected. By means of a dilute solution of Arfonad the blood pressure in patients under general anesthesia could be depressed regularly and bleeding in the operative area was usually decreased. The duration of action was short and blood pressure would rise promptly when the drug administration ceased. These factors represented advantages over the methonium compounds, which were usually given intermittently, often depressed blood pressure beyond accepted safe levels and required a longer period of time for recovery. Arfonad appeared to offer real minute to minute control so that one might use it intermittently as needed during a surgical procedure. Tachyphylaxis did not occur as was occasionally reported with hexamethonium. Thus the stage was set for the use of Arfonad in certain neurosurgical operations feared by both surgeon and anesthesiologist, namely for aneurysms and angiomas within the cranium in which hemorrhage often obscured the field so that anatomical dissection was virtually impossible. Secondly a bulging dura with risk of herniation of the brain could be avoided by inducing hypotension following which intracranial pressure was markedly decreased. The risk to life appeared to be measurably improved and the chances of a successful operation virtually assured. Sadove et al (11), administered Arfonad to unanesthetized human subjects, observing an initial fall of blood pressure with a plateau or leveling off around 90 mm. Hg. systolic. Additional drug produced no further fall unless the

position of the subject was changed, when a further moderate fall occurred with the same tendency to level off. They postulated that the ganglion block was not 100 per cent effective and that powerful compensatory mechanisms remained active. The response to hypoxia and hypercarbia remained active. In the presence of general anesthesia greater hypotension resulted from the same dosage of Arfonad with less tendency to level off. American investigators have warned against the head-up position during hypotension because of possible ischemia of the brain and resultant permanent damage.

Experiences with Arfonad

During the past three years Arfonad has been investigated clinically in many countries and several reports have appeared in the literature. Following our experiences with Hexamethonium it was proposed to test Arfonad by a few simple changes in technic. Orthopedic, neurosurgical and general surgical procedures of major type were chosen which offered problems to the operating teams because of bleeding. Operations included radical hysterectomy, abdomino-perineal resection, radical mastectomy, segmental resection of lung for tuberculosis, radical neck dissection, spinal fusion, reconstruction of hip or shoulder, and craniotomy for intracranial angioma or aneurysm. Since our total number of cases only approximates 60 this report will not be statistical, but general comments will be made relative to our experiences. The age group varied from late teen age to the seventh decade for both sexes. It was apparent that the young patient possesses greater compensatory ability than does the patient beyond the fourth decade. Only two patients were refractory to the hypotensive effect of Arfonad, one age 17, the other 38, however it was not our policy to push the drug beyond rates of three to four milligrams per minute or a total amount of 750 milligrams for each patient. Each of these two patients also received small doses of hexamethonium bromide with little or no demonstrable effect on blood pressure, yet in one the surgeon felt that bleeding was decreased satisfactorily. The operations were performed in a general hospital, a Veterans Administration hospital, and a tuberculosis sanatorium, but anesthesia was administered by the same small group of anesthesiologists. In our earlier trials with hexamethonium salts it was apparent from the outset that the average patient with tuberculosis required only one-fifth to one-third the amount of hypotensive agent to produce satisfactory conditions; this proved to be true with Arfonad, too, and has led us to approach the patient with tuberculosis with a small test dose of any blocking agent capable of depressing vital functions. Whether the explanation lies in the fact that these patients have been at bed rest for long periods of time is difficult to answer; certainly many appear to be first class physical risks prior to surgery. Nontubercular patients did not show the same sensitivity to hypotensive drugs. The systolic blood pressure was maintained at approximately 80 mm. Hg. in all patients except those undergoing neurosurgical procedures. In the latter, a systolic pressure of 80 mm. Hg. was maintained during the opening of the dura so that intracranial pressure was lowered and bulging of the brain was avoided. During the more difficult exposure and ligation of an aneurysm or the isolation of vessels feeding an angiomatous tumor the systolic pressure was usually dropped an additional 20 points down to 60 mm. Hg., thus allowing better exposure and faster completion of the procedure with greater safety. Blood loss is minimized by this technic and although in some centers no blood transfusion is administered, we feel that induced hypotension is safe only if blood replacement is immediate and equal to the loss. Whole blood is and has been freely available to us for some time as a result of the anesthesiologist's interest in intravenous therapy and blood banking; thus we have no good argument for withholding transfusion when it is indicated.

Tachyphylaxia, or failure of repeated administration to produce the same effect, has not been noted with Arfonad in our cases, although blood pressure did not usually fall as precipitously as was observed with hexamethonium. All patients were given general anesthesia, which is supplementary to induced hypotension as it depresses mechanisms which attempt to compensate the lowered blood pressure and altered peripheral resistance. No unusual difficulties arose during anesthesia and surgery as a result of induced hypotension, but the anesthesiologist must be particularly alert and careful during the period of low pressure to observe the ordinary rules relating to respiration and circulation. The level of anesthesia if allowed to become too light may be evidenced by failure to maintain hypotension while the reverse is true of deep planes, namely profound and serious hy-

potension. Failure to supply adequate oxygen or to remove excess of carbon dioxide may produce a critical state in a shorter period of time during induced hypotension; thus one is committed to careful minute to minute observation and attendance if the method is to be used safely. Saklad has warned that controlled respiration represents a possible hazard, in that venous pressure falls to low levels during the hypotensive state and may be exceeded by the pressures exerted against the lungs by manual or automatic ventilation. The result is a further reduction in blood pressure and circulatory failure.

Effects of Posture

Posture in addition to general anesthesia and autonomic blocking agents has been considered an essential factor in the production of satisfactory hypotension since the gravity effect of the circulating blood mass will produce a still lower blood pressure in the head-up position. This advantage becomes at once a disadvantage if one considers the mean pressure necessary for nutrition of brain tissue with the head-up position and a systolic pressure of 60 mm. Hg. or lower at the level of the heart. The British literature (12) described surgical procedures in which the blood pressure was deliberately maintained between 40 and 50 mm. Hg. for periods of more than one hour. However, a complication rate of one in 38 and a gross mortality rate of one in 459 leads one to examine critically the several technics used in England prior to a questionnaire survey by Hampton (13) in 1953. In general our policy regarding position has been that the head should not be raised more than five degrees above the horizontal plane but excepting this, that whenever possible the operative site should be uppermost to allow for the effect of gravity in draining blood from the surgical field. For example, patients scheduled for operations upon the shoulder, hip, or spine can be easily postured without compromising circulation to the head. Lowering the legs during anesthesia and surgery facilitates hypotension by pooling or trapping an appreciable volume of blood which may be considered as a reservoir for immediate autotransfusion and resuscitation if shock occurs during the operation. The legs are raised to the horizontal plane when one wishes to terminate the hypotensive state. By means of posture plus cessation of drug, hypotension with Arfonad can usually be reversed in about 10 minutes. Vasopressor agents are unnecessary at termination of surgery, but should the occasion arise when quick reversal is necessary, such drugs as ephedrine, methoxamine and l-arterenol will produce satisfactory elevation of blood pressure.

Coincidental with the era of induced hypotension, neurologists, radiologists, and neurosurgeons have produced startling advances in the diagnosis and treatment of intracranial aneurysms and angiomas. Previously the operative mortality had been prohibitive, but with refinements in diagnosis and operative technic, plus contributions by the anesthesiologist in the form of light general anesthesia utilizing endotracheal technic and induced hypotension, the number of successful operations began to increase while the mortality fell to below 50 per cent and has continued to fall.

Technic

We wish to describe the technic employed for 11 patients operated upon at Hartford Hospital following establishment of the diagnosis of intracranial aneurysm. Ages varied from 29 to 50, thus the potential salvage of human life is great if mortality can be improved. Arfonad was used in all cases, as was the anesthetic combination of thiopental sodium, succinylcholine for endotracheal intubation, nitrous oxide, oxygen and trichlorethylene. Patients were placed supine upon a horizontal operating table, and induction was accomplished slowly by administering thiopental sodium intravenously followed by nitrous oxide four liters and oxygen two liters, trichlorethylene being started at the same time as inhalation of gases and continued for about ten minutes. Succinylcholine 30-40 mg. was injected intravenously, and a cuffed Portex endotracheal tube was introduced orally under direct vision. The balloon cuff was inflated only if passive respiration was necessary during the procedure.

The endotracheal tube was connected directly to a non-rebreathing valve, and the entire assembly was fixed well so that the tube would not be easily moved about and result in coughing or bucking during the operative procedure. The neurosurgeon infiltrated the line of incision with procaine, one per cent concentration, to which a vaso constrictor drug had been added. This did not interfere with the action of Arfonad later on. The patient was in the supine horizontal position with the head raised slightly, and the surgical approach was through supra-orbital frontal trephines of one and one half inch

diameter. This approach usually sufficed for any operative procedure within one inch of the circle of Willis. Self retaining brain retractors contribute to adequate exposure, and rubber bands placed proximal to the aneurysm add a factor of safety in regard to hemorrhage if a vessel is accidentally torn. A 16 gauge needle was placed in each internal saphenous vein at the ankle through which fluid was administered slowly. Hypotension may be started early at the surgeon's request if the dura is tense upon exposure, or it may be withheld until the aneurysm is exposed. A 0.1 per cent concentration of Arfonad in dextrose and water was started slowly, drop by drop, since a few milligrams may effect a quick drop in blood pressure. Over-shooting the mark and obtaining undesirably low pressures was not as frequent as when Hexamethonium was used. The aim generally has been to limit hypotension to about one hour total time at the 80 mm. Hg. level during exposure and not more than 15 minutes at 60 mm. Hg. systolic during actual ligation or clipping of the aneurysm. The pulse rate was generally slow during administration of Arfonad, varying between 70 and 110. In fact, this was so constant that if the pulse exceeded 120 per minute other causes were considered. Tachyphylaxis was not noted in our cases, nor was there any evidence of histamine release. When the surgeon felt that he had completed the obliteration of the aneurysm, Arfonad was discontinued and a rise in blood pressure was observed in five to 10 minutes. This has been quite consistent in all of our cases, when Arfonad was used, unless surgical shock associated with hemorrhage was present.

Case Reports

Two case reports are presented with charts showing typical vital signs during the operative procedure.

CASE 1. K. M., a 41 year old male merchant who had sudden right frontal headache two weeks prior to hospital admission. On examination stiffness of the neck, weakness of left arm and pyramidal tract signs were observed. Spinal fluid contained blood. An angiogram revealed presence of a saccular aneurysm at the trifurcation of the middle cerebral artery on the right side. Recovery was gradual and the patient was in good general condition upon admission for elective surgery. On October 21, 1953, through a right supraorbital trephine, craniotomy was performed with exposure of the circle of Willis. Endotracheal anesthesia and induced hypotension were employed with the patient supine, as illustrated in Fig. 1. A rubber band was placed around the proximal portion of the right middle cerebral artery which was dissected out to expose the trifurcation and a large saccular aneurysm. Two branches of the middle cerebral artery were dissected away from the sac and its neck was then ligated with cotton ligatures, completely collapsing the sac. Convalescence was uneventful except for a 24 hour increase in weakness of the left arm which cleared rapidly and completely. The patient was discharged well on the tenth post-operative day. (Fig. 1)

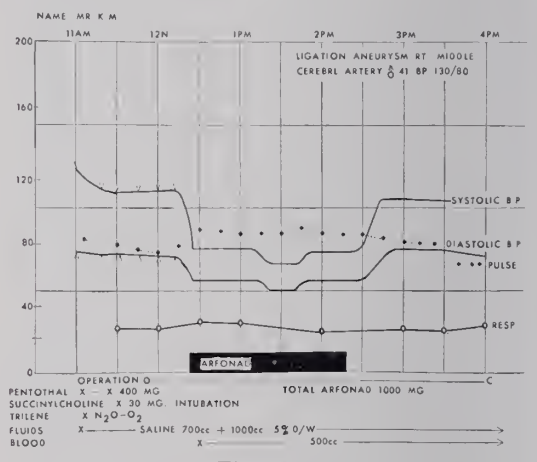

Figure 1

Response of a normotensive patient to Arfonad (R) and general anesthesia.

CASE 2. B. V., a 47 year female secretary with known hypertension for many years was admitted to the hospital for diagnostic survey. One month previously she experienced a sudden convulsive episode associated with severe occipital headache, nausea, vomiting, and alteration in state of consciousness. Examination at that time revealed presence of subarachnoid hemorrhage. Recovery was gradual but the patient felt that she was unable to think clearly. On admission to Hartford Hospital, blood pressure was 170/100, pulse 84, A-V nicking of retinal arteries was present, but neurological examination was essentially normal. Bilateral closed carotid angiograms revealed evidence of an anterior communicating aneurysm. On January 21, 1954, a right frontal craniotomy was performed with the patient supine. Endotracheal anesthesia and induced hypotension were employed as illustrated in Fig. 2. There were technical

difficulties relative to exposure of the aneurysm so that the medial third of the right frontal lobe was excised. There were also technical difficulties encountered in obliterating the anterior communicating artery and the aneurysm but this was finally accomplished. Hemorrhage was estimated to be approximately one liter, accordingly two units of whole blood were administered during the procedure. Postoperatively the patient presented a lobotomy-like mental picture with confusion, compulsive activity, occasional bladder and bowel incontinence and retrograde amnesia. Improvement was slow, but on the ninth day after surgery she was oriented as to place and person. Spinal fluid pressure was normal with slight xanthochromia on the fourteenth day. She was discharged to a Veteran's Hospital for convalescence and rehabilitation, and the neurosurgeon predicted that cerebral function should eventually return to normal. (Fig. 2)

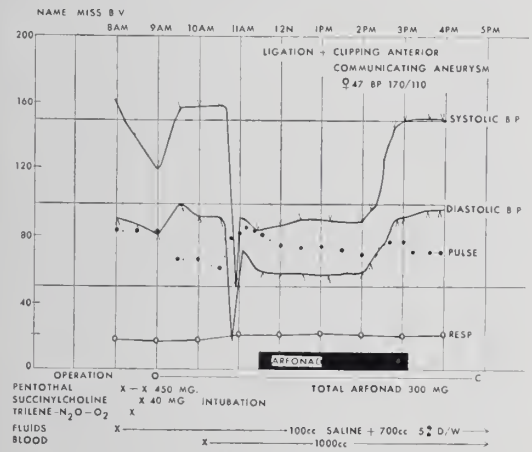

Figure 2

Response of a moderately hypertensive patient to Arfonad (R) and general anesthesia.

The results in our 11 cases were not startling since four died and two were unimproved, leaving five who were improved. However the operating conditions were better than without hypotensive technic, and mortality, which had been close to one hundred percent, was improved. As experience was gained the duration of operation was shorter, the period of hypotension was terminated as soon as feasible and anesthesia was kept in the lightest possible plane, using nitrous oxide, oxygen, and a small amount of trichloroethylene. Complications mentioned as deterrents to hypotensive technic did not occur. These include reactionary hypertension or prolonged hypotension, hemorrhage, anuria, nausea or vomiting and vascular thrombosis. The deaths were jointly considered by members of the team and were thought to be due primarily to the disease which necessitated the operation. It is predicted that the next dozen cases will yield a larger percentage in salvage of patients who can lead a productive life.

Discussion

When, where, and by whom should induced hypotension be used? Since the technic is precise and the limitations critical we feel that the busy single handed practitioner should not utilize the method. In addition, it is essential that the surgeon understand the principles of the technic and the hazards of undue and prolonged hypotension. Adequate preoperative evaluation of the patient is essential, particularly the cardio-vascular respiratory, renal and hepatic functions. A blood volume determination in patients with malignant disease is almost a necessity if safety of the patient is your first concern. We feel conservatively that blood pressure should not be lowered beyond 80 mm. Hg. systolic except for specific reasons and for short periods of time. Likewise we feel that posture should not be altered more than five degrees above the horizontal plane as it affects the head and trunk, that blood should be replaced as it is lost, that vasopressor agents should be employed for undesired levels of hypotension and that ventilation should be adequate at all times. Only by observing these middle of the road factors can American anesthesiologists avoid the complications and accidents reported to Hamptom and Little and continue our assessment of newer methods and technics. This brings us to the conclusion that induced hypotension should only be used by those who are qualified and experienced with complex technics in anesthesia, that the patients should be fit and that Gillies' dictum should be applied: "There is only one indication for induced hypotension: it should be applied only when its advantages will be of certain benefit to the patient and when these are likely to outweigh the accepted risks".

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Plastic Surgical Aspects of Facial Lacerations and Avulsions *

JOHN CALVIN WEETER, M.D.

J. THOMAS GIANNINI, M.D.

Louisville

The importance of obtaining the best cosmetic result in facial lacerations and other facial injuries has in recent years been heightened by an increased awareness on the part of the public of the possibilities of plastic surgery, and of the measures taken to obtain minimal scarring and minimal deformity. People are conscious today of the fact that much can be done to minimize the scarring after facial injury. Lay magazines have featured articles on plastic surgery and its various technics, such as sandpaper surgery, grafting, etc. The public — being better informed of these possibilities — frequently ask us: "Would sandpaper surgery help?" or: "Could you graft skin to cover these scars?" Insurance companies are beginning to ask for not only an evaluation from a functional standpoint, but also for an evaluation of cosmetic deformity in order to compensate equitably the patient who has suffered disfigurement in an accident. Insurance agents are aware of the fact that disfigurement influences unfavorably the patient's ability to meet others, and frequently alters his capacity to earn a livelihood. The purpose of this paper is to review the basic principles upon which we depend to obtain the best esthetic result, and also to review some of the recent advances in plastic surgical technic which have been found to give us improved cosmetic appearance.

Generally speaking, facial lacerations and avulsions can be divided into two types—those in which maximum cosmetic benefit can be obtained through one stage debridement and immediate plastic repair and those in which several stages or multiple operative procedures are necessary to achieve the best cosmetic and functional result.

Lacerations falling in the first group of immediate plastic repair are essentially clean-cut lacerations caused by a sharp knife-like instrument. These wounds are virtually fresh, noncontaminated, of a nonbruising and noncrushing nature. If irregular, crushed, devitalized tissue is present along the edges of the laceration, it is easily debrided and closed primarily. If the initial wound is roughly parallel to the so-called Langer's lines (Fig. 1 - A), we can rest assured that the resulting scar, provided that healing occurs without complication, will give us a fine line more or less parallel to the natural wrinkles of the face, and one which, when the scar is mature, will appear more or less as a normal skin wrinkle.

Facial lacerations falling in the second group, that is, those requiring several stages in order to achieve maximum cosmetic benefit, are basically those with the following characteristics: the wound is typically grossly irregular, with considerable crushing and bruising of the wound edges so that the wound, if sutured primarily without debridement, exhibits induration, redness and edema of the wound edges for a considerable period of time after the removal of sutures. Wounds falling in this second category may likewise be grossly contaminated with dirt or foreign material, or the circumstances of the injury may be such that it is certain that considerable numbers of bacteria have been introduced into the wound at the time of injury. The interval of time between injury and primary repair here is of importance. If the wound is seen immediately after injury and thoroughly cleansed and debrided, it may be readily

*Presented at the Annual Meeting of the Kentucky State Medical Association, Louisville, Ky., September 21-23, 1954.

converted to a wound of the immediate plastic repair category by careful accurate and sharp debridement of all devitalized and contaminated tissues. If three-to-six hours have elapsed between the time of injury and the time the patient is first seen for suturing, it is obvious that bacteria have had a chance to multiply and infiltrate into the wound tissues themselves, and as time progresses, the chances of obtaining a clean healing wound are decreased. Many so-called multiple step-ladder wounds, those in which several parallel lacerations occur in close proximity to one another, obviously cannot be adequately debrided if the edges of the wounds are crushed and if the rows of lacerations are closer than one cm. apart. Other wounds requiring multiple-stage repair are those with gross loss of tissues, such as avulsions where large defects must be grafted primarily. In these cases, multiple excisions of the graft after healing and the utilization of normal adjacent facial skin is necessary to give the best cosmetic result.

We find, therefore, that many of the lacerations commonly seen in the emergency room fall into the second category. Therefore, it is usually wise to inform the patient that several stages may be necessary in order to obtain the best cosmetic result. If later secondary plastic repair seems certain, it is wise to conserve at the time of primary suturing all available tissue adjacent to the wound which is viable and not crushed. This may be valuable material for later plastic repair, and for this reason debridement at the time of initial closure is performed with conservation of facial tissues in mind.

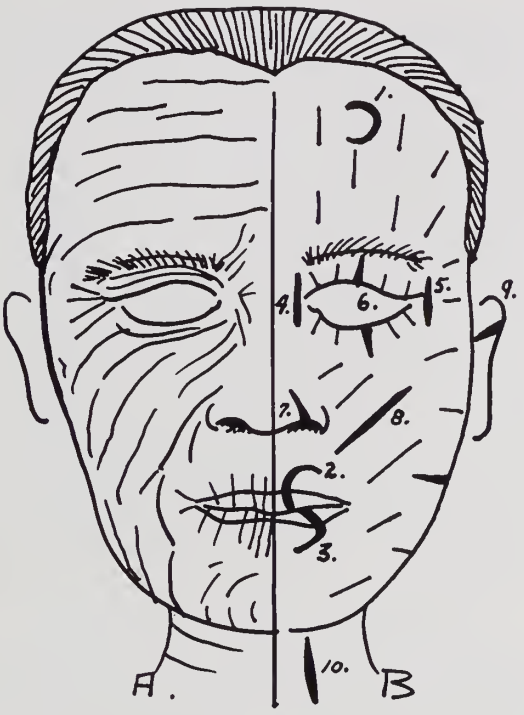

Figure 1

A. Normal wrinkle lines.

B. Direction of lacerations commonly requiring plastic repair, revision, or Z-plasty.

1., 2., 3. Trap-door lacerations.

4., 5. Vertical lacerations of inner or outer canthus of eye.

6. Vertical through and through eyelid lacerations.

7. Through and through lacerations of nostrils.

8. Lacerations perpendicular to wrinkles.

9. Through and through lacerations of edge of ear.

10. Vertical neck lacerations.

The Importance of Wrinkle Lines

The classical Langer's lines, first described by Langer in 1861, are our most important guide in establishing a scar line which will give us the best cosmetic result. Figure 1.-A. shows a modification of Langer's original drawing. This is virtually a composite drawing of the normal wrinkles found in the average face. The wrinkle lines are essentially perpendicular to the line of pull of the muscles of facial expression, and are our most important guide in not only determining the proper direction for facial scars in cases of lacerations, but also in the excision of small tumors of the face. Where it is possible by excision of scar tissue, or by debridement of a laceration to have a scar which is roughly parallel to the normal wrinkle lines of the face, we can be assured that the resulting scar will ultimately be relatively inconspicuous. In cases, however, in which the laceration or resulting scar is more or less perpendicular to the normal wrinkle lines of the face (Fig. 1.-B.), as the scar matures and contracts, the force of pull of the collagenous fibers tend to depress the scar beneath the surface and bulge the adjacent tissues outward in contrast. The result is a depressed scar which is obvious not only because of its depressed nature, but also because it is perpendicular to the natural wrinkle lines. Lacerations or scars of this type can be improved by utilizing the principles of the so-called Z-plasty. This procedure may be used either at the time of the primary repair in the case of immediate plastic closure, or may be used in multiple-stage repair to convert the straight-line scar into a more or less zig-zag line which can give

or stretch like an accordion fold. A Z-plasty is basically performed by forming two triangular flaps by incising each side of the wound at an angle of about 45 to 60° with the wound. These flaps are so outlined that when their positions are interposed the resulting central leg or midportion of the "Z" will be more or less parallel to the natural wrinkle lines of the face. In lacerations or scars over several inches in length, it is frequently advisable to perform multiple Z-plasties so as to convert the single straight lines into a zig-zag line of several "Z's." The result is an irregular, but well camouflaged scar, a portion of which is parallel to the natural wrinkle lines of the face, and a scar which can stretch like an accordion. A scar of this type will not depress below the surface as it matures and the collagenous fibers contract.

Details of Primary Suturing

When the wound is first seen and the history is noted, the physician usually decides in his mind whether maximum cosmetic benefit can be achieved at the time of primary closure. As previously mentioned, the wound is inspected for devitalized tissue; hemostasis is accomplished by pressure and in the case of large bleeding vessels, they are clamped and tied with ligatures of very fine catgut. We prefer using 4-0 or 5-0 plain catgut for this purpose because the less suture material buried in a wound of this type, the less reaction will ensue as healing progresses. The wound area is thoroughly cleansed with surgical soap and water, and thoroughly flushed with copious quantities of saline in order to rinse away any foreign material which may have been introduced into the wound itself. Grossly devitalized tissue is then carefully removed by debridement, and the wound closed in layers using enough buried subcutaneous sutures of 4-0 plain catgut to give accurate approximation of the wound edges without tension. The skin itself is closed with 5-0 or 6-0 black silk, or any other fine available suture material. Material of this caliber is preferred because the smaller size suture material tends to leave less obvious suture marks. Multiple small sutures spaced about one cm. apart are preferable to many large sutures which may cause cross-hatching, or necrosis of the wound edges. After the wound is carefully sutured together, conserving all available tissue, an adequate pressure dressing is applied to obviate the danger of hematoma, and to take the tension off the wound edge itself. This is usually accomplished by the use of elastoplast or tape applied with the pull in a direction perpendicular to the line of the laceration itself. The use of tetanus toxoid booster dose, or tetanus anti-serum is routine, and the use of antibiotics such as penicillin for the first few days after closure is a matter of surgical judgment in each individual case. Proper antibiotic therapy, according to the cleanliness of the wound, is essential to good wound healing, until all evidence of redness and cellulitis has disappeared from the wound edges.

Sutures in wounds of this type are usually removed on the fifth day. The wound is inspected on the third day after suturing and at this time, if any of the sutures seem to be tight because of the edema of surrounding tissues, these sutures are removed before they have a chance to tear or work their way inward, thus causing cross-hatching. After removal of sutures on the fifth day, the wound is carefully supported by elastic bandages or adhesive tape in order to prevent wound separation. The use of an elastic dressing to take the tension off the wound edges is sometimes necessary for a period of six weeks in order to minimize the natural spreading of the resulting scar.

Secondary Plastic Repair

In cases requiring revision or secondary plastic repair, it is customary, as previously mentioned, to conserve all available viable tissues at the time of original suturing. After the removal of sutures it is customary to observe a waiting period of several months until all evidence of wound reaction, redness, induration and edema have subsided. The surgeon can then plan his operative procedure which basically will consist of excising the resulting scars, undermining sufficient tissue adjacent to the wound to enable adequate closure without tension, performing Z-plasties where indicated, and in general converting the scar to a clean-cut surgical wound which is fashioned so as to take advantage of being parallel to Langer's lines, or take advantage of the basic principle of the Z-plasty. In a case of multiple facial lacerations it may be advisable to perform several stages of scar excision to give the best cosmetic result, especially in cases where adjacent scars are too close to each other to operate both at the same time, or, in cases of wide scars, too wide for stretching and excising the entire defect in one stage. In secondary or plastic repair, whether the

repair is a straight line or a Z-plasty-type incision, the wound is closed in layers with sufficient subcutaneous 4-0 catgut to obtain closure without wound tension, and by using 5-0 and 6-0 black silk in the skin. Here, as in the case of primary repair, the sutures are inspected on the third day and removed by the fifth postoperative day. Again, the wound is supported by elastic bandage or by adhesive tape in order to prevent wound separation and scar spreading.

Sandpaper Surgery or Surgical Planing of Scars

The use of abrasive material to even the irregular levels of a scar has recently become quite popular, especially in the treatment of scars resulting from acne. The basic principle observed in surgical planing of scars is to sandpaper or plane the elevated portions of scar tissue down to the level of the most depressed portion of the scar. The skin is prepared by washing with surgical soap, sterile drapes are applied, and the local area is anesthetized. The irregular surface is then sandpapered or planed with a fine wire brush rotating on a flexible shaft and actuated by an electric motor. The result is shaving the elevations down to the levels of the depressions so that the resulting surface after healing is relatively smooth and free from irregularities. This technic is especially useful in cases where there are multiple superficial avulsions or small flaps of epithelium elevated above the surrounding surface as in the case of a shattered windshield accident. The simplest of these surgical planing procedures or sandpaper surgery can be safely performed in the office. However, we find it advisable in most cases to hospitalize these patients so that they may be operated upon under general anesthesia if the case is extensive. After the planing process, bleeding is controlled by the application of a one-layer-fine-mesh gauze pad which may be soaked in adrenalin solution (1:2000) in order to control bleeding as quickly as possible. The fine-mesh gauze is then left in place over the surface of the wound and a pressure dressing is applied. Two days later the outer pressure dressing is removed, leaving in place the single layer of fine-mesh gauze which is then permitted to dry in the air and remain as a simple cast-like shell which essentially forms a surgical crust. This crust consisting of gauze, serum and dried blood then peels away as healing by epithelialization progresses beneath the gauze itself. After the crust falls away the resulting area is smooth and red. The redness decreases during the following several months and by the end of six months to one year the skin again assumes the color of the surrounding normal skin. The planing of irregular scars in this fashion has been highly satisfactory. However, it should be mentioned that in the case of broad scars or scars not running parallel to Langer's lines, plastic revision of the scar or Z-plasty, if indicated, is preferably done several months prior to attempted sandpaper surgery.

X-Ray

It has been noted that the use of x-ray therapy in mild superficial doses decreases the induration which is sometimes seen after closure of a wound. The proper use of x-ray therapy minimizes scar tissue reaction and induration and is advisable in many cases. Team work between the plastic surgeon and the roentgenologist is essential and therapy is usually given in divided doses during the first three weeks after surgery. The total skin dose necessary usually does not exceed 300 or 400 "r" in children and 600 to 800 "r" in adults. X-ray therapy is likewise used to advantage in hypertrophied scars.

Facial Avulsions

Many cases are seen in the accident room in which a flap of skin is partially avulsed so that there is a question of adequate blood supply for viability. Generally, this occurs when the width of the base of the flap is less than its length. There are several excellent tests of viability which we have found useful, and these must be carefully evaluated to determine whether the flap should be returned to its original bed, or cut free and defatted to convert it to a full-thickness graft.

Both arterial supply and venous drainage must be considered in determining flap viability. A pink flap which shows rapid capillary filling after local blanching by digital pressure, and a flap which shows bright arterial bleeding from the cut derma, may generally be considered viable. Conversely, a congested or cyanotic flap, showing dark oozing from the cut derma, will probably not survive.

If from these observations it is determined that the flap is viable, it is debrided and returned to its original bed for primary suturing. The pressure dressing in such a flap is important, and should be adjusted so that there is no constriction of the flap at its base. Gravity is responsible for venous drainage in these cases, and the

injured part should be positioned so that the tip of the flap is elevated above the base, and the base is elevated above the level of the heart in order to insure satisfactory drainage and minimize edema. If the flap is partially nonviable, the tip should be trimmed until its color is satisfactory and the remaining defect grafted immediately.

If the entire flap is to be discarded, it may be possible to convert it to a full-thickness graft by careful removal of all fatty subcutaneous layers. The local application of continuous cold saline compresses is advised in cases of questionable viability; the cold lowers the local metabolic requirement whereas the application of heat may be harmful.

Summary

Immediate plastic repair of facial lacerations should be considered where possible, with careful attention given the details of debridement, hemostasis, layer-by-layer closure with fine suture materials, and a good supportive dressing. In many cases of severe lacerations, conservation of tissues and secondary plastic repair may be advisable. The judicious use of plastic technics such a Z-plasty, multiple excisions, grafts and sandpaper surgery or planing is necessary to give the best functional and cosmetic result. Partial facial flap avulsions deserve special consideration in order to conserve tissues needed for later plastic repair.

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Hemoglobin Metabolism and the Anemias

J. DOUGLAS RUFF, M.D., M.S.*

Lexington

Hemoglobin belongs to a class of ferroporphyrin protein compounds which are able to combine reversibly with oxygen without being oxidized. The function in mammals of this pigment is to take up oxygen from the environment and deliver it to the tissues, and for this job each molecule of hemoglobin is adapted to combine loosely with four atoms of oxygen. Under the high partial pressure in the pulmonary capillaries, oxygen enters into chemical combination with the iron of the hemoglobin molecule to form oxyhemoglobin. This is released to the tissues under conditions of lowered oxygen tension.

Myohemoglobin is a closely related hemoglobin pigment situated in the muscle cell. Its function of storing, rather than transporting, oxygen was recognized by Bancroft after noting its much greater affinity for oxygen. At oxygen tension of venous blood, myohemoglobin is about 95 per cent saturated, whereas the circulating hemoglobin is 75 per cent saturated or less. Thus myohemoglobin is admirably adapted for providing oxygen to the contracting muscle. It is interesting to note that in diving mammals the percentage of myohemoglobin is particularly high. The percentage has even been found to be correlated with the duration of the animal's dive. The dolphin's muscle, for example, contains 3.5 per cent myohemoglobin, while the muscle of a seal contains seven per cent.

First let us consider the formation of hemoglobin and synthesis of porphyrins in the human body. In the adult, normal red cells are formed only in the red bone marrow, except under conditions of stress, and it is difficult to know whether a specific building factor is required for hemoglobin synthesis or for the formation of the red cell itself. Hemoglobin formation occurs usually in the nucleated cell or normoblast and is completed just before extrusion of the nucleus. According to its molecular structure, hemoglobin is composed of three components: a porphyrin ring, ferrous iron, and native protein or globin.

The Formation of Protoporphyrin IX

Pyrrole pigments are widespread in nature and all have the same basic chemical structure, four pyrrole rings linked by four single carbon atoms. Such a closed ring construction gives this group of compounds and their derivatives stability. For the porphyrin nucleus, neither preformed porphyrin nor the pyrrole nucleus is required. Neither hematin, the ferroporphy-

*Division of Medicine, Lexington Clinic, Lexington, Kentucky.

rin compound, nor hemoglobin itself are utilized in porphyrin synthesis, and no condition has been found in which the synthesis of the porphyrin nucleus is a limiting factor. It is believed, then, that the actual precursors from which the porphyrin ring is formed must be relatively simple compounds.

There was little knowledge of the mechanism involved in the formation of the protoporphyrin structure of hemaglobin until Rittenburg and Shemin showed by feeding glycine labeled with radioactive N 15 to both humans and animals that glycine was used in the formation of all four of the pyrrole rings of hemoglobin. The same work indicated that newly formed red cells are formed and released into the circulation rapidly. The blood concentration of N 15 falls rapidly at 120 days, indicating that, at the end of the red cell's life span, the breakdown products of this part of the molecule are eliminated and not reutilized.

In contrast, when iron is liberated after hemoglobin breakdown, it is reutilized almost quantitatively. Iron absorption is geared to the individual need and the daily requirement in man is probably in the range of one to four mg.

The metabolism of the protein element of hemoglobin is intimately connected with general protein metabolism, and according to Whipple, the protein part of catabolized hemoglobin is reutilized again in the synthesis of hemoglobin. In anemic protein deficient dogs, he has shown that hemoglobin synthesis takes priority in utilizing body protein stores.

Since the mechanisms of hemoglobin synthesis and red cell formation are so intimately related, we must consider the building stones which have been found necessary for human red cell production.

Cartwright has done exhaustive work on the dietary factors concerned in red cell production, and a summary of these findings is in table I.

Table I

Factors Necessary for Erythropoiesis

Vitamins, etc.	*Amino Acids*	*Minerals*
Lactobacillus casei (Folic acid)	Tryptophan	Iron
	Lycine	Copper?
Other Extrinsic or dietary - B-12?		Cobalt?
Intrinsic stomach factor		
Other anti-PA - Liver, B-12		
Riboflavin?		
Nicotinic acid?		
Pyridoxine?		
Ascorbic acid?	Endocrine factors - thyroid, etc.?	

Anemia

Anemia by definition is a reduction below normal in the number of red corpuscles per cubic millimeter, the quantity of hemoglobin or the volume of packed cells. The accepted normals are rather high, and the usual range for women is from 12 to 14 gm. and for men 13 to 15 gm. of hemoglobin. Symptoms of weakness, fatigue and nervousness are often erroneously attributed to low grade anemias. This leads to many unnecessary hematinic prescriptions and may mask the diagnosis of various causes of blood loss as well as early cases of pernicious anemia.

Table II shows a classical concept of the anemias from both the morphologic and etiologic standpoints. Assuming that one has a patient with a definite anemia, it is clinically useful to ask oneself three questions about the case. First, is there adequate blood production; second, is there increased blood destruction; and last and most important, is there unusual blood loss? The simple discipline of using this approach will solve many or probably most problems of anemia before any fancy laboratory tests are done and, we hope, in lieu of any shotgun remedies.

If there is no clue which suggests blood loss in the history and physical examina-

Table II*

Type	*Cause*
Macrocytic	Deficiency of antianemic liver principle
	Intense activity of bone marrow
Normycytic	Sudden loss of blood
	Destruction of blood
	Lack of blood formation
Hypochromic microcytic	Deficiency of iron through: (1) Deficient diet (2) Defective absorption (3) Continued blood loss (4) Excess demands for iron

*This table is incomplete for the purpose of brevity.

tion, then a simple blood smear usually will place the anemia morphologically. A hypochromic microcytic appearance of the cells on blood smear almost always means blood loss and should initiate thorough investigation. A suitable test for occult blood in the stool is a helpful screening procedure, and if positive, an x-ray of the gastrointestinal tract and a proctoscopic examination usually are in order. The author prefers the guaiac test because of its particular sensitivity.

It is well to remember that blood loss, in men in particular, frequently is caused by a chronic peptic ulcer. Menstruation in women causes many cases of hypochromic anemia.

A blood smear is also usually adequate for the diagnosis of pernicious anemia and the other macrocytic anemias caused by deficiency of the liver principle.

Table III will give an idea of the type of investigation carried out in the unusual case of anemia which is still elusive.

When the diagnosis of an anemia is established, usually the more pleasant task is treatment. The possibilities are limited and can be covered under four headings: (1) transfusions, (2) treatment of the cause, (3) the liver principle, and (4) iron.

Transfusions

For simple blood loss, transfusions are unequalled, but blood is given only for its immediate effect. When blood loss is a symptom of one of the hemorrhagic disorders, or even when there is no disturbance of coagulation, the blood may be of value, because the hemorrhage is halted by the antihemorrhagic substances introduced. In hemophilia, this may be the component of thromboplastin which hemophiliacs lack. In thrombocytopenic purpura, the mechanism by which transfusions control the bleeding tendency is still obscure. In pernicious anemia, it is extremely rare that one cannot wait the two to three days for parenteral liver or B-12 to take effect. In chronic hypochromic anemia, iron and a good diet should be used in preference to blood.

Table III

Cause	*Examination*
Blood loss	History and physical
	Guaiac test of feces
	X-rays of G.I. tract and kidneys
Faulty blood production	Peripheral blood smear
	Bone marrow
	Reticulocyte count
Increased blood destruction	Peripheral blood smear
	Reticulocyte count
	Bone marrow
	Pigment excretion
	Coombs test
	Survival of transfused cells

In the normocytic and simple microcytic anemias the only treatment, aside from removal or treatment of the underlying cause of the anemia, is transfusion. In particular we are aware that the only treatment for the anemia accompanying renal insufficiency is transfusion. Blood transfusion then is indicated only when liver, B-12, folic acid and iron cannot be expected to be effective. The exception is, of course, when the patient's condition is critical and the diagnosis obscure.

Treatment of the Cause

When there is hypochromic microcytic anemia, chronic blood loss, even if not evident, should be suspected. A diet poor in iron seldom is the cause. In men hypochromic anemia should arouse suspicion of bleeding from the gastrointestinal tract, particularly from a chronic peptic ulcer. Hookworm infestation produces anemia of the same type.

Anemia from blood destruction, infection, renal insufficiency, blood dyscrasias and metastatic tumors of the marrow are all beyond the scope of this paper. Splenectomy is the only means by which the anemia of congenital hemolytic jaundice can be relieved permanently.

The Liver Principle

The more pleasant side of the anemias comes after the diagnosis, for treatment is simplified by the fact that there are only two groups of agents which are effective, and these are specific for the particular deficiency they represent. A naive and sometimes disastrous solution to the problem is encouraged by almost every major pharmaceutical house in the form of a pleasant mixture of iron and liver or related substances. The fallacy in this empirical approach lies in the simple fact that the case with a deficiency of the antianemic principle in the liver does not always respond adequately to liver or B-12 by mouth.

The deficiency of the antianemic liver principle causes the usual macrocytic anemia, such as pernicious anemia. In some

instances of macrocytic anemia the deficiency seems to be due to a lack of extrinsic factor, a food substance, probably vitamin B-12. In pernicious anemia the underlying defect is thought to be inadequate formation of a gastric ("intrinsic") factor as a result of which absorption or utilization of the extrinsic factor is impaired. Whatever the cause, the deficiency may be met by administration of liver extract, vitamin B-12, or in certain instances, folic acid.

Although desiccated hog's stomach, brewer's yeast and folic acid will sometimes bring about remission in pernicious anemia, the only dependable substances are B-12 and liver used parenterally. B-12 is given in doses of from 1 to 80 mg. parenterally per day.

Failure of liver or B-12 therapy has at times been caused by the presence of a complicating infection or disease. An additional cause has been a concomitant ascorbic acid deficiency.

Iron

The deservedly famous Blaud's pills probably represented the first effective iron replacement. Ferrous iron is absorbed much more efficiently than the trivalent forms, and ferrous sulfate or gluconate can be given in amounts of 0.6 to 1.2 gm. daily.

Iron may be taken shortly after meals in order to lessen gastric irritation or between meals if possible in order to increase absorption. In rare instances intravenous iron must be used to correct iron deficiency, probably because of inadequate iron absorption.

Cobalt has been used rather extensively in recent years for treating refractory anemias of all types. Seaman and Kohler have reported a recovery in one case of acquired erythrocytic hypoplasia during cobalt therapy. The mechanism by which cobalt causes stimulation of erythropoiesis is not definitely known and its use in the treatment of refractory anemias would seem extremely limited at the present time. There certainly seems no rationale in including cobaltous chloride in the same preparation with ferrous sulfate.

Summary

1. Although there are a great many gaps in our knowledge of hemoglobin metabolism, certain "building blocks" for the hemoglobin structure are definitely required.

2. Of these "building blocks", Folic acid (Lactobacillus casei), the antianemic liver principle (Vitamin B-12 and liver extract), and iron (ferrous sulfate) are time-tested agents in the treatment of anemias.

3. Diagnosis of an anemia should be based on the consideration of the specific defect in hemoglobin metabolism involved.

4. Correct diagnosis is the basis for successful treatment of anemias. It is far better for the patient to go untreated and observed for a time than to have the diagnosis masked by the use of "shot gun" remedies.

5. Usually the only remedies needed for the anemias are: blood transfusions, parenteral B-12 or liver extract, and oral folic acid or iron.

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Nodular Goiter and Carcinoma of the Thyroid

EUGENE TODD, JR., M.D.*

Lexington

In recent years, along with increased interest in cancer of other parts of the body, the problem of carcinoma of the thyroid has received more and more attention and study. In the medical literature many papers have appeared dealing with all phases of this problem. In more recent years hope was aroused that the radioisotopes would be of great benefit in this condition. Unfortunately this hope has not been fulfilled and surgery remains the main hope for people with cancer of the thyroid.

The incidence of thyroid cancer in reported series in the literature has varied from four to 26 per cent. As all but a fraction of one per cent of these tumors occurred in nodular goiter the essayist undertook to study the incidence of cancer in the patients with nodular goiter seen at the Lexington Clinic at Lexington, Kentucky. This paper deals only with those patients seen from July 1, 1948 until January 1, 1954.

Nodules in the thyroid gland are a problem which has not yet been solved. It is not merely that these lesions may be pressing on nearby structures or that they are disfiguring; both these problems can be remedied. The main problem consists of the fact that any one of these nodules can be a malignant tumor. The only way to tell for sure whether a given mass in the thyroid is innocent or malignant is by surgical excision followed by microscopic study. This is true of the thyroid just as it is true of most nodules or masses in the breast. Although great progress has been made in the treatment of diseases of the thyroid gland in the last 15 years, almost no progress has been made in determining preoperatively which thyroid nodules are likely to become malignant, or even which ones are already malignant when first seen. Of course, one can suspect that malignancy is present in a nodule which is rapidly enlarging after having been present for many years, or in one which is fixed to surrounding structures and is causing obstruction to the adjacent airway or to deglutitions, but these latter factors are usually late in occurrence and the lesion should be treated long before they occur. One of the signs of probable malignancy is, as has been mentioned, rapid growth in a nodule or adenoma which has been present for months or even years. Another sign is change in voice due to paralysis of one of the vocal cords from involvement of the recurrent laryngeal nerve. This is usually described as hoarseness and the paralysis can be demonstrated by use of the laryngeal mirror. Most adenomas of the thyroid are soft, but the adenoma harboring cancer is usually hard, and frequently is as "hard as a rock". This same degree of hardness, however, is also frequently found to be due to either calcification or chronic thyroiditis as characterized by Struma Lymphomatosa or Hashimoto's disease.

All solitary nodules in the thyroid gland should be considered with suspicion, as the incidence of carcinoma in such is higher than in multiple nodular goiter. Any nodule in a child under sixteen years of age should be considered cancer until proved otherwise. It has been shown repeatedly that solitary adenomas in children are cancer in a very high percentage, varying from 50 to 90 per cent, and this is especially true of boys. As an illustration, in nine cases of solitary nodule of the thyroid occurring in children and reported by Coffey[2] from the Children's Hospital of George Washington University, five of the nine were revealed to be papillary adenocarcinoma, an incidence of 55.5 per cent. These children were under age 13. Kearns and Davis[4] reported three patients under 12 years of age in a total group of 155 patients with nodular goiter and all three had carcinoma of the thyroid. Fourteen of these 155 were male and seven of these 14 had carcinoma.

The controversy over the so-called "lateral aberrant thyroid nodule" has now been settled. Until recent years it was thought by most that the thyroid masses found in the neck lateral to, but not connected to, the thyroid, constituted either embryological rests or simple aberrant thyroid tissue. Pemberton in the mid-1930's first mentioned that these structures should be viewed with suspicion. After Crile[1], in 1942, reported twenty-one cases of lateral aberrant thyroid nodules, all of which were proved to have primary carcinoma in the thyroid, Pemberton's previous assertions were generally accepted.

*Lexington Clinic, Lexington, Kentucky.

Since Crile's report there have been many additional confirmatory reports, so that now one can safely say that a patient who has a thyroid nodule in the lateral side of the neck can be considered to have carcinoma of the thyroid. There may be no demonstrable gross lesion in the thyroid even when the gland is exposed surgically, but if lobectomy is done and careful search made, a primary carcinoma will be found.

Carcinoma of the thyroid occurs 3:1 more often in women than in men, but when all nodular goiters are considered as they occur in the two sexes, the relative incidence of carcinoma in non-toxic nodular goiter is higher in men than in women[6].

Crile[5] reported a preoperative correct diagnosis in 27 of 30 cases of carcinoma of the thyroid. This is considered an extremely high correct preoperative diagnosis by most surgeons. Ochsner et al. reported a correct preoperative diagnosis in 36.6 per cent[6]. Cole's series was diagnosed correctly before operation in 21 per cent and Rogers, Asper and Williams reported a 48 per cent correct preoperative diagnosis[7].

Carcinoma in toxic nodular goiter is rare but it does occur. Many reported series have had no associated toxicity with carcinoma but, as will be seen in the cases reported below, toxicity does not mean that the entire lesion is benign, especially in those glands with multiple nodules. Hyperthyroidism may occur from the metastatic lesions alone. These metastatic thyroid carcinomas obviously are well enough differentiated to produce thyroxin.

Papillary adenocarcinoma is the most common form seen, which is fortunate as this type is the easiest cured. It also occurs most often in the younger age groups, and the more highly malignant types, such as the spindle and giant-cell carcinomas and the undifferentiated adenocarcinomas, are found most often in elderly patients. These latter tumors are often bulky with a history of recent rapid growth. There are no known five year survivals in these tumors. Most of these people die within a year of the time the diagnosis is made. They metastasize by bloom stream and have a predilection for bone and lung metastases.

Carcinoma of the thyroid is best treated by surgical removal with removal of the spread, if any, by radical neck dissection. The cure rate from surgery is very high in the papillary types of cancer, but the picture in the more undifferentiated cancers is very gloomy, as has been mentioned before. X-ray therapy should be given postoperatively, if it is indicated, as some of these tumors are fairly radio-sensitive. However, x-ray treatment is usually of no benefit in the highly malignant type of carcinoma. The thyroid carcinomas differ from carcinomas of most other organs in their response to radiation. The more differentiated the thyroid tumor, the more sensitive it is to irradiation. The more anaplastic thyroid tumors are less radio-sensitive. Some of the thyroid carcinomas can be effectively treated by radioactive iodine. This isotope is I_{131}. But as the great majority of these tumors do not take up iodine, they cannot be treated in this way. It is most effective in the treatment of well differentiated cancers. However, as a majority of these cancers are amenable to surgical cure I_{131} is rarely required. As the highly malignant tumors do not utilize iodine, it cannot be used where it would be most useful. For these reasons the usefulness of I_{131} is limited to those carcinomas of low malignancy which have extended beyond the scope of surgical removal[8]. By complete ablation of functioning thyroid tissue some metastatic thyroid carcinoma can be made to take up radioactive iodine and thereby effective radiation can take place in these lesions. The functioning thyroid tissue may be destroyed either by surgical removal or by I_{131}. However, surgery will be most effective and the myxedematous state obtained much sooner than can be done by radiation treatment. One other possible drawback to radioactive iodine is the fact that many of these cases are in girls and young women, so one has to think of the possible effect of the radiation on childbearing.

Sixty-three per cent of cancers seen at the Cleveland Clinic were papillary adenocarcinoma of low grade malignancy. Forty percent were under 30 years of age and 20 percent were under 20[8]. A group of patients reported by the Lahey Clinic[10] showed 10.04 percent in incidence of malignancy in discrete adenoma of the thyroid and an incidence of 0.62 percent in those specimens having multiple nodules. George Crile, Jr., reports 24.5 per cent carcinoma incidence in surgically removed non-toxic, solitary nodules in the thyroid and 10.9 per cent incidence in multiple nodular non-toxic goiters[9].

From July 1, 1948, until January 1, 1954, there were 269 patients seen at the Lexington Clinic on whom a clinical diagnosis of nodular goiter was made. Of these, 158, or 59 per cent, submitted to surgery. Fif-

ty-eight of these patients operated on were considered to be toxic, or in other words had a toxic nodular goiter. In this group of 158 patients, 75 proved to have single adenoma in the gland and 83 had multiple nodules. It should be stated here that it is sometimes impossible to be certain pre-operatively that a given patient has a solitary nodule in the thyroid gland. On physical examination a nodule in the gland may seem to be solitary, whereas at surgery there will be revealed two, or even several, distinct nodules in the involved lobe of the gland. On the other hand a wrong impression the other way may be gained on physical examination. What seems to be two or more nodules may be revealed to be only a solitary nodule with compressed but otherwise normal gland around or adjacent to the adenoma giving the impression of multiplicity.

In the group of 158 patients operated on for nodular goiter, 11 had carcinoma of the thyroid as revealed by microscopic pathological examination. Four of these patients were thought to have carcinoma pre-operatively, an incidence of correct diagnosis of 36 per cent. The total incidence of carcinoma in the group seen is 4.09 per cent and an incidence of 6.96 per cent in the group operated on. In the group of 83 with multiple adenomas there were three who proved to have carcinoma, an incidence of 3.6 per cent malignancy. Two of these three patients had toxic goiters.

Among the 75 cases operated on who had solitary adenomas in the thyroid gland, there were eight who had carcinoma, giving an incidence of 10.66 per cent carcinoma in this group. None of these cases were toxic.

In the group who had carcinoma, the ages ranged from 16 years to 71 years. One patient was 16, two were in the fourth decade, two were in the fifth decade, one was in the sixth decade, and there were five between 60 and 70. There were 10 white females and one white male.

Eight of the 11 had a pathological diagnosis of papillary adenocarcinoma, a type incidence of 72.7 per cent. All of the 11 patients are alive six months to five years after treatment, although two patients have had local or regional recurrence, and one other is still alive but with lung metastasis, presumably from the thyroid malignancy. This lady had three separate and distinct carcinomas in one year, at least two of which were present at the same time. She was first seen with an adenocarcinoma of the fundus uteri, which tumor had grown downward and was protruding through the cervix. At this time the hard mass was noted in the right lobe of the thyroid and was thought to be carcinoma. She weighed 270 lbs. She was treated with radium to the uterus and then about six weeks later a total hysterectomy was done. No evidence of metastasis was noted in the abdomen. About six weeks later a right lobectomy of the thyroid was done. It was impossible to remove all of the tumor. X-ray therapy was given. This tumor was revealed to be a grade III papillary adenocarcinoma of the thyroid. About eight months later she was seen with a small intraductal adenocarcinoma of the right breast. No regional metastasis was found. There has been no local recurrence of the thyroid tumor but there are multiple lung metastases thought to be due to the thyroid. The masses in the lung will not utilize radioiodine. X-ray therapy has resulted in some diminution in size of these metastases, and the patient is still feeling well with no chest symptoms.

One patient in the series, aged 71, had an anaplastic adenocarcinoma of the thyroid. She had had multiple nodules in the gland for at least 20 years. Sudden increase in size had occurred in the last two months before operation. She was operated on in 1951, at which time all of the right lobe and almost all of the left were removed. X-ray therapy was given. In 1953 she returned with a toxic diffuse goiter on the left side of the neck. Radioactive iodine was given with excellent symptomatic results, and she is still living without evidence of recurrence of the carcinoma.

There were two patients, one of which was a male, who had a Hurthle cell carcinoma of the thyroid. Both of these patients are still living and well.

Two of the patients with papillary adenocarcinoma represent good examples of the aberrant thyroid nodules in reality being metastatic carcinoma. Case Number 83500 was a 36-year-old white female, who had a nodule in the anterior cervical lymphatic chain just above the left lobe of the thyroid. This was revealed to be adenocarcinoma compatible with thyroid carcinoma. The thyroid gland felt and looked normal, but after removal of the left lobe there was revealed a small firm nodule in the lobe near the upper pole. This was a grade I papillary adenocarcinoma. The

other patient was a 50-year-old white female, who had a small mass in the left side of the neck under the middle third of the left sternomastoid muscle. Excision biopsy of this mass showed it to be an adenocarcinoma, probably of thyroid origin, as it proved to be.

Two of these patients had had subtotal thyroidectomy some years previous to the onset of their carcinomatous degeneration. Case Number 51752 had a toxic diffuse goiter operated on in 1941. Eight years later she appeared with a nodular goiter on the left side, and this was revealed to be carcinoma. The other patient had had a toxic solitary fetal adenoma removed, also in 1941. Ten years later she was found to have grade III adenocarcinoma in the left lobe of the thyroid, which is the same side from which the fetal adenoma had been previously removed. A review of the original tissue reveals that the previously removed adenoma was probably malignant when removed 10 years previously.

These two patients confirm a well known fact that removal of one or more adenomas does not prevent the later occurrence of others, some of which are malignant.

Summary

A partial review of the literature concerning the incidence of occurrence of malignancy in the thyroid gland has been reported. The role of radioactive iodine has been briefly discussed. The incidence of malignancy in 158 consecutive operations for removal of nodular goiter has been reported.

One hundred fifty-eight patients with nodular goiter have been operated on for their disease by surgeons at the Lexington Clinic in a five and one-half year period with no operative or hospital mortality.

Conclusions

1. The incidence of malignancy in solitary nodules is high enough to warrant surgical removal.

2. All children with nodular goiter should be considered to have carcinoma of the thyroid until microscopic examination of the nodule proves that it is not malignant.

3. All patients with a mass in the neck adjacent to the thyroid should have excision biopsy of the lesion and further surgery at that time, if microscopic study of the frozen section proves it to resemble thyroid tissue.

4. Toxicity in multiple nodular goiter does not mean malignancy may not be present in one of the adenomas.

5. All multiple nodular goiters should be frequently examined for possible change in size or consistency and appropriate measures taken if such changes occur.

6. Radioactive iodine is of little benefit in the treatment of cancer of the thyroid except in a few isolated special cases.

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Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

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Please mail your scientific articles to the Journal of the Kentucky State Medical Association, 620 South Third Street, Louisville 2, Kentucky.

CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

A Case of Disseminated Histoplasmosis

Presentation of the Case:

ALEX J. STEIGMAN, M.D.
Department of Pediatrics

Our patient represents an advanced form of what is being more frequently recognized as a fairly common infection, particularly in Kentucky and adjacent states. The patient will be presented by one of our residents.

R.M., Case No. 31991

This 6½ month old white male was admitted on June 14, 1954 because of abdominal enlargement. The mother stated that shortly after birth the child's abdomen appeared large and had since varied considerably in size. During the periods of swelling the child had appeared irritable and had acted as though he were in pain. Whenever the swelling subsided the baby would look and act happy. During this time he usually had three daily bowel movements described as soft and dark yellow. The color of the urine appeared unremarkable. He had been seen by several physicians who attributed the symptoms to air swallowing.

The child had weighed 5½ lbs. at birth following an uneventful pregnancy and an uncomplicated home delivery. He was breast fed for four months with occasional supplements of an evaporated milk formula. At five months cereals, fruits and vegetables were added to his diet and he was given a Similac formula. At about the same time he developed an acute febrile episode diagnosed as tonsillitis.

Physical Examination

On admission his temperature was 101°, respiration 30, pulse 160, weight 16 lbs. He appeared well developed and nourished but markedly pale and very restless. No lymph nodes were palpable. The chest was clear to percussion and auscultation, the pulse regular with no cardiac murmurs or enlargement detected. The abdomen was moderately distended and a mass, thought to be the spleen, was felt 13 cm. below the left costal margin and in the left iliac fossa. The liver edge was palpated 5 cm. below the right costal margin.

The initial hemogram showed: Hgb. 4 gms; RBC - 2.6 million; WBC - 3,900 (31% segs, 68% lymphs, 1% monos.) Urinalyses were negative; febrile agglutinations against typhoid and brucellosis were negative; tuberculin (PPD) and histoplasmin 1/100 skin tests were negative; blood culture negative.

The x-ray examination will be discussed by the radiologist.

LAWRENCE A. DAVIS, M.D.
Department of Radiology

The child showed a bronchopneumonic infiltrate in the right upper lobe with hilar adenopathy on the right. The heart appeared to be moderately enlarged and globular in shape, a finding not confirmed on subsequent films. X-rays of the long bones and skull were normal. Studies of the abdomen by Barium enema revealed that there was a downward displacement of the splenic flexure. The enlargement of the spleen could not be confirmed by radiologic evidence.

Course in the Hospital

Following admission the child was transfused until his hemoglobin was restored to normal. He was treated with oral Terramycin, 50 mg. every 6 hours until the fourth day, when, following the passage of several loose stools, the treatment was changed to Penicillin ½cc. every 12 hours. An exploratory laparotomy was performed on the sixth hospital day.

Discussion

DR. STEIGMAN: The decision to perform the abdominal exploration was made in conjunction with the surgeons. Since it was not exactly clear what the mass represented and since it was causing the child considerable distress it was decided that we needed further data. The possibility of a tumor had been suggested by the x-ray findings and a very real indication for surgery appeared to exist.

Hugh Lynn, M.D.
Department of Surgery

At the time of operation the clinical finding of a large spleen was confirmed. This was removed because of the difficulty it was causing the child. A liver biopsy was also taken. The left kidney was normal in size and no evidence of tumor was found.

Israel Diamond, M.D.
Department of Pathology

The spleen and liver revealed a granulomatous process with findings consistent with disseminated Histoplasmosis. This was confirmed by a subsequent bone marrow biopsy which revealed numerous granulomata and which on culture yielded Histoplasma Capsulatum.

Dr. Steigman: This child had a smooth post-operative course and was discharged 18 days later, no longer irritable, free of abdominal distension, and eating well. His weight at that time was 16 lbs. 2 oz. Although removal of the spleen is not always indicated in cases of disseminated histoplasmosis, it was felt advisable in this case because of the distress due to its size. The degree of recovery in these children is also quite variable. This one has been seen three times subsequently at monthly intervals. He has continued to show some improvement, eats well, and, when last seen, weighed 17 lbs. 5 oz. The liver is still palpable but his blood picture remains normal except for a mild leucocytosis. Repeat x-rays of the chest have been negative.

We are indebted to Amos Christie, M.D. and J. C. Peterson, M.D., of Vanderbilt University, for much of our recent understanding of this illness. Formerly thought to be a universally fatal disease, it has been shown that there are many benign forms of the illness and that about a third of the cases occur in childhood. Studies have also shown that it is particularly common throughout the Ohio Valley and especially in Kentucky and Tennessee. It is most usual for us to discover children in our clinics who react positively to the Histoplasmin skin test. The chest x-rays of these children often show evidence of a hilar adenopathy and occasionally multiple focal lesions which resemble those of tuberculosis.

The severe form, which tends to occur in infants and debilitated adults, may resemble the onset in this child. Gastrointestinal disturbances are common, especially diarrhea and a failure to gain. It is usual to have a low grade fever and this may be the presenting symptom. As the disease progresses the child suffers malaise, is irritable, and becomes pale along with an enlargement of the abdomen. In these children, as in our patient, there is usually enlargement of the spleen and liver.

Subsequent to the discovery that many children with chest findings suggestive of those of healed tuberculosis reacted to Histoplasmin skin tests and not to tuberculin, it becomes possible to identify many milder stages of the disease process. We now see a group of children with rather vague complaints such as malaise, loss of appetite, low grade fever, and some cough who have positive skin tests for this disease. X-ray usually reveals the characteristic hilar adenopathy and occasionally multiple focal parenchymal lesions which may or may not be calcified. These children usually lose weight during the course of the disease, consistent with the poor appetite. They continue to present these symptoms over a period of months and are the source of a good deal of concern to the parents. As a group, however, they make a slow, but adequate recovery.

Dr. Davis: X-ray evidence of healing is indicated by a resolution of the pulmonary infiltrate, regression of the adenopathy and beginning of calcification. Healed lesions are represented by densely calcified single, multiple or miliary areas.

Dr. Steigman: As in this patient, the diagnosis is often confusing. Any generalized illness causing progressive anemia, weight loss, leucopenia, and enlargement of the spleen and liver may present a picture similar to the severe form of the disease.

The search for an effective drug which will kill the infecting organism without damaging the patient has not been successful. Recently ethyl vanillate has been tried but without notable success.

It is fortunate that spontaneous recovery takes place in a large percentage of these children. It is not easy to be optimistic when presented with a chronically irritable child, suffering from cough, weight loss, and malaise, but experience shows that supportive measures over a period of six months may effect a satisfying change in the child's clinical picture.

SPECIAL ARTICLES

MEDICINE AND VOLUNTARY HEALTH INSURANCE*

PERCY E. HOPKINS, M. D.

Chicago

Chairman, Committee on Prepayment
Medical and Hospital Service,
American Medical Association

Should medicine support all forms of voluntary health insurance? The answer is, of course, "not all forms." Medicine *should* support and actively promote only those forms of insurance programs or those policies or contracts which, in the judgment of its expert advisers, are satisfactory in every way.

Dr. Hopkins

But the problem is not as simple as that sounds. A number of other factors enter it. While medicine and insurance are both exacting in their methods, neither is termed an exact science. Moreover, there are limitations to insurance just as there are limitations within medicine.

First, every policy of every company has to be approved by the state in which it is to be sold and standards vary.

Second, no physician should urge any specific plan on his patients. His function should be to urge the patient to carry that insurance which fits the needs and the pocketbook of the patient and his family. This applies to both commercial and nonprofit plans and recognizes the validity and sincerity of both.

Third, organized medicine should undertake, through experts in insurance, to screen all offered policies and interpret them for both physician and patient. That leaves the patient free and able to make his own selection and relieves the physician of the need or temptation to try to interpret them himself.

Fourth, obviously this type of relationship will require planned educational effort, directed at both physician and patient, to teach both the advantages and limitations of insurance, where to seek information about it, and how to fit needs, type of insurer and scope of policy together satisfactorily.

There are bound to be misunderstandings in insurance. If a physician should recommend a specific plan to an inquiring patient and if that patient should later be dissatisfied with any phase of the plan, it is only human nature for the dissatisfied patient to blame the physician for his predicament. In that instance, the blame might be proper; but is the physician in any position to assume that responsibility?

I think the same danger is inherent if a physician undertakes to interpret an insurance contract (Blue Shield or private) at the request of an insured patient. First of all, it takes time which the physician can ill afford. Second, he is not the final authority, since a claim clerk or claim officer will ultimately decide whether or not a benefit is payable. In that instance, the physician may lose the good will which he has spent years developing and become involved in a situation which is beyond his control.

I realize only too well that physicians are importuned to support this or that plan actively. Advertising prevalent in certain areas may lead the general public to assume that the physician is not only a health counsellor but an insurance expert as well. A pitifully small number of physicians, in my opinion, is so qualified. It behooves those of us who may have any official connection with particular plans to use *our* best efforts to see to it that those plans are not presented improperly to the general public.

Health Insurance—an unfortunate term —is from an historic point of view relatively new. It has, however, experienced

*Excerpts from a talk presented at the Fourth Annual County Medical Society, Lexington, April 15, 1954.

phenomenal growth. In addition, it has created a new vocabulary for many of us who have attempted to maintain more than a passing interest in the total development.

The word prepayment is mentioned frequently, and often it is mentioned along with insurance. That is both unfortunate and incorrect. According to Webster's dictionary "prepay" is defined as "to pay, or to pay the charge upon, in advance or beforehand". The word "prepayment" connotes a degree of totality. It implies that the total charge for a service that is included as a benefit is paid in its entirety and in advance.

Again referring to Webster, the following is said about "insure"—"to assure against a loss by a contingent event, on certain stipulated conditions, or at a given rate or premium; to give, take, or procure an insurance on or for; to enter into or carry, a contract of insurance on . . ." From the above you can readily appreciate that there is much less of an element of totality in the word "insure" than there is in the word "prepay".

If such words are used indiscriminately and if salesmen for Blue Shield, Blue Cross and private insurance companies oversell their particular programs or sell them improperly, is it any wonder that the public has become confused?

It has been said, and I agree, that health insurance is one of those subjects discussed the most and understood the least among many of our socio-economic topics. For instance some self-styled authorities maintain that health insurance programs should pay the complete cost of diagnosis and the complete costs of health maintenance as well as all costs incident to therapy. These so-called authorities gauge the effectiveness of health insurance—or lack of it—by benchmarks which are unrealistic.

These "authorities" are not the only ones whose attitudes do not serve properly the true function of insurance. There are also physicians who look on insurance either as a source of full payment of their fees or as an excuse for elevating routinely their fees for services. Either of these attitudes is shortsighted and can only do harm to the sound development of voluntary coverage.

At the risk of being considered somewhat elementary, I should like to review and discuss briefly some of the fundamental principles of insurance.

1. *The risk must be subject to the laws of mathematical probability.*
2. *There must be an insurable interest.*
3. *It is necessary that there be a larger number of independent risks spread over a fairly large geographic area.*
4. *The risk involved must be of financial importance to the insured.*
5. *There must be an element of uncertainty as to whether the insured against contingency is likely to occur.*

Many insurance authorities feel that the normal home or office calls for minor indispositions do not qualify under this principle. These costs are usually considered budget rather than insurance items.

6. *The existence of insurance must not tend to increase the risk.* This element is frequently called "moral hazard".

In the realm of life insurance, there is a real and understandable factor that minimizes the tendency to bring about the payment of a claim.

It becomes more apparent that the existence of insurance should not increase the demand for those health services that may form the basis for benefit.

7. *The risk must be measurable financially.* This principle differs from the first one mentioned in that it deals with the measurement of cost of the risk rather than measurement of probability of occurrence. This principle is extremely important since the cost of the risk—among other factors—is one of the primary elements in calculating an appropriate premium.

There is a very definite limitation on the extent to which physicians can support any one type of insurance to the exclusion of all other types.

Suppose a particular plan is advertised or known as "the doctor's own plan". Suppose also that the mechanism is so organized that the physicians agree to back the plan by pledging their professional services. As you know, this has been done and these pledges have been in lieu of the normal capitalization of an insurance company. Now suppose that the benefit is paid directly to the physician. In that case, the physician is both insurer and beneficiary. In this dual role, he is likely to arouse some suspicion that such a plan is more for his benefit than for the benefit of the policyholders.

Then, too, the physician is less likely to be interested in keeping premiums at

reasonable levels. Premiums are, as I have said, predicated on benefits. The physician may be inclined to increase benefits—when he is the direct beneficiary—with resultant increase in premiums. Insurance contracts are for the most part two-party agreements between the insurance company and the policyholder. A third party in the contract, whether it be physician or hospital, complicates matters. Not only is there the possibility of third party intervention between insurer and insured—but there is the added danger of an intervening third party disturbing the traditional physician-patient relationship.

Perhaps another factor has entered the realm of voluntary health insurance as a result of attempts to underwrite coverage on a "service benefit" basis. This "service benefit" is an effort to provide benefits in the form of professional services rather than in dollars. If carried to any appreciable extent, it may undermine the traditional concept that the individual is primarily responsible for paying for goods or services he uses. This responsibility of the individual should be maintained. To overlook this is to entertain the philosophy that "someone else" is going to be responsible. If this erroneous philosophy is maintained by enough people long enough then it will make no difference who that "someone else" will be. It may even be the government.

It should be emphasized that the basic principles of insurance are inseparable. I feel that the inability of Blue Cross to meet the last principle—that the risk must be measurable financially — has contributed to the troubles experienced by it and similar plans which attempt to underwrite a "service" contract. While Blue Cross —as well as other insurers—can predict with accuracy the incidence or frequency of the insured against contingency, they can never offer coverage at any *stable* premium as long as they never know what the cost of the benefit is going to be.

Some tell us that there are demands for health insurance on a comprehensive and service benefit basis. They allege further that, unless these demands are met by voluntary agencies, it will be an invitation to government to fulfill them. When we inquire about the source of the demand, the answer frequently given is merely "labor". If this is correct, we might pose the question of whether "labor" is making demands which are in keeping with its philosophy in other negotiations. When labor bargains with an employer, it is usually on the basis of so many dollars for so many hours of work. To bargain on the aforementioned basis as a producer and then to seek all-inclusive benefits as a consumer is inconsistent, to say the least.

I do not mean that this is not a problem. I do feel, however, that the problem is susceptible to solution if all parties to insurance agreements understand the proper function of insurance and if all providers of services observe the golden rule.

The A.M.A. has indicated that it is not in the business of insurance and gives no favored standing to any one type.

The A.M.A. has also adopted a statement which outlines properly the true function of health insurance. The statement reads in part:

'It is the consensus of the Council that constituent state and territorial associations and component societies should endeavor to continue to improve the standard for all types of voluntary health insurance within their respective areas. The physician as well as the patient should be ever-mindful of the true concept of voluntary health insurance which embraces the philosophy that such mechanisms are aids to the recipients of health care in the financing of such care.'

'The patient should have a free choice of physician regardless of the insurance plan purchased or provided . . .' and

'The insurance program should be voluntary in character in order that the patient may select the type of prepayment plan he chooses and purchase as much medical and hospital coverage as he feels financially able to carry.'

Some of you may feel that my remarks upon this point constitute a rather negative sort of support for voluntary health insurance. They are not intended to be negative, but in my opinion many physicians may find it necessary to revise their thinking on this subject.

If there is merit in the philosophy of free choice of physician, then the people should be free to choose their method or methods of financing health care. It should then follow that, if insurance is desired, the people should also have a right to choose from among health insurance programs those plans which they feel will best suit their needs.

I believe that under our economic system there is room for all worthy types of voluntary insurance programs to compete side by side.

(Continued on page 324)

EDITORIALS

ANTICOAGULANTS IN MYOCARDIAL INFARCTION

The value of anticoagulant therapy in the management of myocardial infarction has repeatedly been demonstrated by many different and well known and reliable investigators. The mortality rate has consistently been lower in anticoagulant treated patients than in controlled groups and this difference has been great enough to be statistically significant.

Recently, some question has been raised as to the advisability of treating all cases of myocardial infarction with anticoagulants. There are a considerable number of cardiologists who believe that the hazards of such therapy are greater than the expected beneficial modification of the mortality rate in that group of patients classified as, "good risk" when first seen by a physician. A good risk patient is said to be one who does not have any of the following: history of previous myocardial infarction, cardiac failure, evidence of shock, abnormal rhythm, enlargement of the heart, intractible pain, thrombophlebitis, and any other condition which would predispose to thrombo-embolic complications.

The consensus of opinion at present, is that all patients that cannot be classified as good risks should be given anticoagulant therapy unless a definite contraindication exists. Anticoagulants should not be given unless the physician in charge is familiar with such therapy and adequate and reliable laboratory facilities are available to do prothrombin times. Jaundice, liver disease, gastrointestinal ulcer or cancer, genitourinary cancer, vitamin K or C deficiency, subacute bacterial endocarditis, recent surgery of the brain or spinal cord, and blood dyscrasias, all contraindicate the use of anticoagulants.

The use of anticoagulants in the good risk group of patients is certainly debatable at the present time and it is not likely that this problem will be solved in the near future. However, until a clear-cut answer is available, it would be advisable to give anticoagulants to all hospitalized patients with myocardial infarction. Whatever anticoagulant is used should be given in sufficient dosage to maintain prothrombin activity at approximately twenty-five per cent of normal for a period of four to six weeks following a myocardial infarction, unless one of the previously noted contraindications exists.

The anticoagulants commonly used (Coumarin compounds and Phenylendandione) exert their action by delaying the clotting mechanism which is accomplished by decreasing the prothrombin production by the liver. This decreases the chance of intravascular thrombosis. The viscosity of the blood is not changed and, therefore, the commonly expressed idea that the blood is thinned by such therapy is not true.

Anticoagulant therapy is relatively expensive because of the necessity of doing frequent prothrombin times. Prothrombin determination should be done daily for the first two weeks of therapy and thereafter may be extended to every third day in the third week and once a week in the fourth week, provided a satisfactory prothrombin time has been maintained during the first two weeks of therapy with relatively constant dosage of anticoagulant.

If anticoagulant therapy is decided upon, it is necessary to observe the patient carefully for hemorrhagic manifestations and these may occur in some patients when the prothrombin activity is not exceptionally low. At the first sign of serious hemorrhage, anticoagulant therapy should be discontinued, of course, and 50 to 100 mgms. of vitamin K_1 (Mephyton) given intravenously which will return the prothrombin time to normal in six to twelve hours.

Adequate anticoagulation therapy can be expected to reduce the mortality rate in myocardial infarction from approximately twenty-four per cent to approximately fifteen per cent when used properly.

Samuel M. Smith, Jr., M.D.

Opinions expressed in contributions to this journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

A NEW COLLEGE—AN OLD JOURNAL

Last year marked the inauguration of the American College of Gastroenterology and its official publication, The American Journal of Gastroenterology. This is not an entirely new organization, being a development largely from the National Gastroenterological Association with adoption of its journal, the Review of Gastroenterology. With the long honored prestige of the parent society and its years of constructive work, the new college has a rich heritage and the promise of a productive future in medicine.

The literature of intestinal tract diseases is not so voluminous as of some others among the subspecialties in Internal Medicine as for instance heart, allergy, blood or pulmonary affections. Gastroenterology, the official journal of the American Gastroenterological Association has long been an authoritative publication in its field. The Journal of Digestive Diseases and Nutrition has also been a source of excellent clinical and investigative information for many years. These three journals will serve as a rich fund of material for physicians especially interested in this field.

The specialty of gastroenterology has been a relatively neglected area. Well organized and accredited residencies or postgraduate courses preparatory for specialization have been scarce but several are now in the course of development. It is hoped that the new college will provide a further impetus for training of such specialists as well as for more adequate, shorter courses for the general internist. We welcome and earnestly desire a useful future for the new American College of Gastroenterology.

SAM A. OVERSTREET, M.D.

CARDIOSPASM: SURGICAL CONSIDERATIONS

Cardiospasm, in its severe form, presents a difficult problem in treatment. In many cases, a satisfactory solution is never achieved. The patient is made miserable by his disease. His inability to swallow solid food and his frequent regurgitation produce an almost intolerable situation. Pulmonary infections may result from nocturnal aspiration of retained esophageal contents. The esophagus may dilate to an astounding size over a period of years.

Medical treatment with anti-spasmodics is usually a failure. Repeated dilatations are sometimes successful but, in many cases, fail to give lasting relief.

The results of surgery have not been entirely satisfactory. The reason for many of the surgical failures is the development of esophagitis. Any surgical procedure which permits free reflux of gastric contents into the esophagus is doomed to failure in a large percentage of cases. It has been well established that this gastric reflux can produce severe esophagitis with ulceration, bleeding, and cicatricial stenosis.

The Heineke-Mikulicz and the Heyrovsky-Grondahl cardioplastics have been devised to relieve the obstruction of cardiospasm. Each of these procedures involves a gastroesophageal anastomosis and permits reflux of gastric secretions into the esophagus. The initial relief of symptoms following these procedures is too often short lived. The subsequent development of esophagitis and its complications may leave the patient in a worse condition than his original cardiospasm had caused.

A more rational surgical attack on this problem is the Heller cardiomyotomy. This consists in a longitudinal division of the muscle coats of the distal esophagus and adjacent stomach. The mucosa bulges into this incision. No opening is made in the mucosa. This operation resembles the Ramstedt pyloromyotomy for hypertrophic pyloric stenosis. It is easily accomplished with a transthoracic approach. It is not necessary to divide any fibers of the diaphragm.

The Heller cardiomyotomy is much less inclined to permit gastric reflux into the esophagus than the cardioplastic procedures described above. It is for this reason that the long term results following the Heller operation are superior to those following the Heineke-Mikulicz and Heyrovsky-Grondahl cardioplastics.

Surgical intervention should be strongly considered in all cases of severe cardiospasm where conservative measures have failed. The use of cardioplastic procedures involving gastroesophageal anastomosis should be abandoned. The Heller cardiomyotomy is the procedure of choice.

MCHENRY S. BREWER, M.D.

ORGANIZATION SECTION

"Senior Day" Program Features 3 Sessions, Louisville, April 18

Plans for the first annual "Senior Day" program, Monday, April 18, to be sponsored by the Kentucky State Medical Association in cooperation with the University of Louisville School of Medicine and the Jefferson County Medical Society have been completed, according to W. Vinson Pierce, M.D., Covington, chairman of the special KSMA Senior Day Committee.

The day's program will open with an address by KSMA president, Clyde C. Sparks, M.D., Ashland, in the Rankin Amphitheater at 11 a. m. At 2:30 p. m. the program will be continued in the Ship Room of the Kentucky Hotel, Dr. Pierce said.

Members of the Jefferson County Medical Society will be hosts individually to members of the 1955 class of the medical school for the social hour, dinner and evening meeting in the Terrace Room of the Kentucky. Featured speaker at the dinner will be Julian Price, M.D., Florence, S. C., a member of the A.M.A. Board of Trustees and the Joint Commission on Accreditation of Hospitals.

"All members of the K.S.M.A. are warmly invited to attend the April 18 meeting when the seniors will be our guests to hear Dr. Price, our distinguished speaker," Gradie R. Rowntree, M.D., president of the Jefferson County society, said.

Sixteen KSMA members will participate in this first annual event.

The purpose of the program, Dr. Pierce said, is to help the senior students became informed on many practical aspects of the practice of medicine, for which there is not time to cover in the curriculum.

UMWA Committee KSMA Hears Memorial Hospital Plans

Sixteen representatives of the Kentucky State Medical Association, including KSMA President Clyde C. Sparks, M.D., Ashland, and President-elect Gant Gaither, M.D., Hopkinsville, and representatives of the UMWA Welfare and Retirement Fund met at the Campbell House in Lexington, Thursday, February 17.

The session was sponsored by the KSMA Advisory Committee to the UMWA Welfare and Retirement Fund, according to Carl Fortune, M.D., Lexington, chairman of the advisory committee. Top UMWA representative was Paul H. Streit, M.D., of the UMWA's Washington office.

One of the highlights of the meeting was a discussion by Dr. Streit on how the Memorial Hospital Association plans to staff and operate the association's hospitals in Kentucky.

The Memorial Hospital Association plans to have an open staff at each hospital, according to Dr. Streit, with the staff operating under the same general regulations as any other hospital would. He said that the hospital plans to use local men in staffing the hospital in so far as is possible.

It was indicated that every Kentucky physician had received an invitation from the Memorial Hospital Association and had been asked to state whether or not he would want to participate in the program.

Dr. Streit said that non-welfare fund patients would be admitted to the hospital if and when beds were available, and that at least one full-time physician would be employed by the Association for each hospital.

Seven KSMA Members to Speak at Ky. Surgical's May Meeting

The Kentucky Surgical Society will hold its annual meeting May 20 and 21 at The Homestead Hotel, Hot Springs, Virginia, according to an announcement by Francis M. Massie, M.D., Lexington, secretary of the society.

Two scientific papers will be featured at this session. Members of the Kentucky Surgical will present the program Friday afternoon, May 20, Dr. Massie said.

The scientific program Saturday afternoon will be given by the Department of Surgery of the University of Virginia Hospital at Charlottesville, and will be under the direction of C. Bruce Morton, II, M.D.

The program to be presented by the KSS Friday afternoon is as follows:

"Open Reduction and Internal Fixation for Multiple Rib Fracture"

Richard R. Crutcher, M.D., Lexington

"Basic Principles in the Management of Thoracic Injuries"

Rudolf J. Noer, M.D., Louisville

"Adrenalectomy for Advanced Carcinoma of the Prostate and Breast"
E. H. Ray, M.D., Lexington

"Retro-Pubic Radical Prostatectomy" (with moving pictures)
N. Lewis Bosworth, M.D., Lexington

"An Oblique Abdominal Incision"
Henry S. Collier, M.D., Louisville

"Unusual Abdominal Emergencies"
Melvin L. Dean, M.D., and Ernest C. Strode, M.D., Lexington

The program to be presented by the Department of Surgery of the University of Virginia Hospital on Saturday afternoon is as follows:

"The Surgical Treatment of Interauricular Septal Defect"
W. H. Miller, M.D.

"Ureteral Cuff Reimplantation in the Treatment of Vesicoureteral Reflux"
Hugh Warren, M.D.

"The Direct Surgical Treatment of Arteriosclerotic Obstruction of the Terminal Aorta, Iliac, and Femoral Arteries"
W. R. Sandusky, M.D.

"Factors Which Influence Healing Time in Fractures of the Tibia"
E. D. Vere Nicoll, M.D.

"Subarachnoid Space Decompression into the Peritoneum"
W. G. Crutchfield, M.D.

"Small Fascial Defects at the Umbilicus Causnig Severe Abdominal Symptoms"
C. B. Morton, M.D.

Thirteenth Dist. Plans 2-Session Program, Ashland, Apr. 14

C. Brinley Bland, M.D., Professor of Obstetrics and Gynecology, at the Jefferson Medical School, Philadelphia, Pa., and KSMA President Clyde C. Sparks, M.D., Ashland, will share the spotlight at the afternoon and evening sessions of the annual meeting of the 13th Councilor District in the Henry Clay Hotel, Ashland, April 14.

Special entertainment is being planned for the wives of the members of the 13th District during the afternoon session, according to Charles B. Johnson, M.D., Russell, Councilor for the 13th District. The wives are warmly invited to the dinner meeting, Dr. Johnson said.

In addition to Dr. Bland, who will speak on "Heart Disease and Pregnancy," Charles H. Maguire, M.D., Louisville, will discuss "Pediatric Surgery," and Arthur M. Schoen, M.D., Louisville, will read a paper on "Recent Advance in Gastroenterology" to round out the afternoon program.

"Our Stake in Organized Medicine" will be discussed by Dr. Sparks and "Child Behavior" by Henry H. Work, Jr., M.D., Louisville, following the dinner. W. Duane Jones, M.D., Ashland, superintendent of the Ashland Tuberculosis Sanatorium, has invited the members of the 13th District to attend a scientific session and luncheon at the hospital that morning.

Dr. Hancock Cites 25 Yrs. Progress in Address to Surgical Congress

J. Duffy Hancock, M.D., Louisville, delivered the Presidential Address at the 1955 Annual Meeting of the Southeastern Surgical Congress held February 21-24 at the Atlanta Biltmore Hotel, Atlanta, Georgia. Attendance at the meeting, held jointly with the Atlanta Graduate Assembly, was in excess of 2,000.

Dr. Hancock is being succeeded as president of the Surgical Congress by Donald S. Daniel, M.D., of Richmond, Va., and the Society's next meeting is scheduled for March 12-15, 1956, in Richmond.

Progress in surgery during the past 25 years since its organization was the annual meeting theme. Several physicians who had read papers at the original meeting used the same titles again showing the progress made in those particular subjects during the past quarter of a century.

In his address, Dr. Hancock tied in the advances mentioned in the various papers and emphasized the fact that the outstanding common denominator of most of the factors contributing to the progress of surgery was a better appreciation and application of the principles of physiology.

President-Elect of the Surgical Congress is James O. Morgan, M.D., of Gadsden, Alabama, and the new Vice-President is Julius C. Davis, M.D., of Quincy, Florida. The offices of Secretary-Director General and Treasurer were not up for re-election this year.

First, Sixth and Second Districts Plan Meetings Next Month

The First, Sixth and Second Councilor Districts will hold meetings at Paducah, Bowling Green and Henderson respectively on successive days, beginning Wednesday, May 25. KSMA President Clyde C. Sparks, M.D., Ashland, will speak at each of these three meetings.

As this issue of the Journal went to press, complete arrangements for none of the three sessions had been completed. J. Vernon Pace,

M.D., Paducah, Councilor for the First District; L. O. Toomey, M.D., Bowling Green, Councilor for the Sixth District, and Walter L. O'Nan, M.D., Henderson, Councilor for the Second District, who made the joint announcement, stated that details of the respective programs would be in the hands of their members well in advance of the dates set.

The May issue of the Journal will carry additional information on these meetings.

Pediatric Postgraduate Course to Feature Guest Lecturers

A Postgraduate Course in Pediatrics to be held each Tuesday morning during May and part of June from 9:30 a.m. to 12:30 p.m. at Children's Hospital, Louisville, has been announced by Joseph A. Little, M.D., Louisville, associate professor of pediatrics. The weekly sessions are being presented by the Department of Pediatrics of the University of Louisville School of Medicine.

Lecturers will include members of the Pediatrics Department and the following guest speakers: Daniel G. Costigan, M.D., instructor in orthopedic surgery; A. B. Loveman, M.D., associate professor of dermatology and syphilology; Hugh B. Lynn, M.D., assistant professor of surgery; Everett G. Grantham, M.D., associate professor of neuro-surgery, and Robert Lich, Jr., M.D., professor of urology and chief of section on urology. In addition, several interesting movies will be shown.

There will be a registration fee of $20.00 and this course has been approved for 24 hours formal credit for members of the American Academy of General Practice.

If additional information is desired, contact W. W. Nicholson, M.D., 1947 Douglass Blvd., member of the Postgraduate Committee of the University of Louisville School of Medicine, from the Department of Pediatrics.

A tentative program follows:

Tuesday, May 3

Tuberculosis—Therapy (slides)
Joseph A. Little, M.D.

Clinical Conference*

Film—"Management of Streptococcal Infection and its Complications"
Dr. Little

Tuesday, May 10

Poliomyelitis—Prevention and Treatment (slides)
Alex J. Steigman, M.D.

Clinical Conference*

Orthopedic Congenital Deformities (slides)
Daniel G. Costigan, M.D.

Tuesday, May 17

Fluid Therapy of Diarrhea
William A. Brodsky, M.D.

Clinical Conference*

Newer Approach to Neuro-Surgical Problems in Children (slides)
Everett G. Grantham, M.D.

Tuesday, May 24

Film—"New Concept of Infant and Maternal Care"
Henry H. Work, M.D., Guest—Marjorie Rowntree, M.D.

Clinical Conference*

Film—"Angry Boy"
Dr. Work

Tuesday, May 31

Increasing Importance of Tumors in Childhood (slides)
Israel Diamond, M.D.

Clinical Conference*

Tumor Board in Action
Dr. Diamond

Tuesday, June 7

Poisoning—Unsuspected Killer (slides)
William C. Adams, M.D.

Clinical Conference*

Medical Emergencies in the Newborn (slides)
Dr. Adams

Tuesday, June 14

Some Interesting Dermatologic Problems (Kodachrome slide presentation)
A. B. Loveman, M.D.

Clinical Conference*

Pediatric Surgical Potpourri (slides)
Hugh B. Lynn, M.D.

Tuesday, June 21

Office Pediatric Urology
Robert Lich, Jr., M.D.

Clinical Conference*

Pyelonephritis—Hidden Danger in Children
William A. Brodsky, M.D.

*Clinical Conferences to be under the direction of Alex J. Steigman, M.D., Chairman, Department of Pediatrics and Professor of Child Health

Nat'l. R. H. Meet Here in '57

The National Rural Health Conference will be held in Louisville in 1957. This announcement was made by Wyatt Norvell, M.D., New Castle, chairman of the KSMA Committee on Rural Health. Dr. Norvell, who appeared before the National Rural Health Conference at Milwaukee, February 23, in behalf of the Kentucky Rural Health Council, presented the invitation at that time.

AMA Annual Meeting in June Promises Varied Program

What amounts to a good "short course" in postgraduate medical education will be offered by means of lectures, scientific and technical exhibits, color television and motion picture presentations during the A.M.A.'s 104th Annual Meeting, June 6-10 in Atlantic City.

Outstanding scientific features include: A report on the Salk polio vaccine trials, a general discussion of resuscitation of the newborn, fracture and fresh pathology exhibits, and a period during which consultants from all branches of medicine will be available to answer questions concerning specific cases.

Between 13,000 and 16,000 physicians are expected to attend the convention. To insure them an opportunity to move more freely among the exhibits the Atlantic City Auditorium will be open exclusively for physicians from 8:30 a.m. until noon on Wednesday, June 8.

Kentucky Pediatric Society Plans Annual Meeting, April 21

The Sixth Annual Meeting of the Kentucky Society for the Advancement of Pediatrics will be held Thursday, April 21, at the Pendennis Club, Louisville. The meeting will begin at 3:30 p. m.

Principal speaker will be Hattie Alexander, M.D., Columbia University Medical School, New York City. Her subject will be Meningitis.

The society's officers for this year are Margaret Limper, M.D., Louisville, president; Robert L. Rice, M.D., Richmond, vice president, and Selby V. Love, Louisville, secretary-treasurer.

Dr. Norvell Speaks at National Rural Health Conference

"Looking Both Ways" was the theme of the Tenth National Conference on Rural Health held February 24-26 at the Schroeder Hotel, Milwaukee, Wisconsin. Preceding the official opening Thursday afternoon, a half-day session was held Thursday morning for physicians only. At that session the emphasis was given to encouraging young physicians to enter rural practice and on ways and means by which this could be accomplished.

At the Friday afternoon session Wyatt Norvell, M.D., New Castle, chairman KSMA Committee on Rural Health, participated in a symposium on "Using our Present Health and Medical Care Resources."

Dr. Norvell, in representing the role of the physician, said, "The very backbone of our life as I see it from the medical standpoint is the family physician," but stressed that faster travel no longer makes it necessary to have a family doctor at every crossroad.

In addition to Dr. Norvell, Kentucky was represented by Walter L. O'Nan, M.D., Henderson, former chairman of the KSMA committee, and J. E. Stanford, of the Kentucky Farm Bureau.

Dr. Kinsman Participates in AMA Osteopathic School Survey

On-campus observations of osteopathic colleges are currently being made by an A.M.A. committee, headed by Past President John W. Cline, San Francisco. Colleges in Los Angeles, Des Moines, Chicago, Kansas City, and Kirksville, Mo. have already been visited.

Serving in an advisory capacity, J. Murray Kinsman, M.D., dean of the University of Louisville School of Medicine, participated in the observations at the Chicago and Kansas City Schools.

Purpose of the on-campus visits is to determine the scope and quality of medical education provided in osteopathic schools. The committee hopes to make a report of its findings to the Board of Trustees and the House of Delegates prior to the A.M.A. meeting in Atlantic City in June.

AMA Appoints Committee to Set Up Grievance Standards

A committee to "recommend standards that may be promulgated by the Association as a guide to the organization and functioning of grievance committees in the constituent state and component county medical societies" has been appointed by the American Medical Association, following authorization by the House of Delegates at the Miami meeting last December.

"Standards drawn up by this committee will no doubt be of material assistance to our county committees and our KSMA Professional Relations Committee," Hugh L. Houston, M.D., Murray, chairman, said, on learning of this announcement.

It was pointed out that the grievance committees and mediation groups of the various state and county medical associations are making a very important public service contribution to the medical profession.

VA Asks Physicians' Cooperation Regarding Emergency Patients

Kentucky physicians, before referring emergency patients to the Veterans Administration Hospital, Louisville, are asked to telephone the hospital long distance and reverse the charges, if necessary.

Mack L. Gottlieb, M.D., chief, admission and outpatient service of the Veterans Hospital, made this request because many patients, he said, come to the hospital only to find that no beds are available. This causes the patient to be inconvenienced and results in economic hardship.

Dr. Gottlieb also requested that clinic patients not be sent to the hospital on non-clinic days. Each county medical society has been sent a schedule of the hospital's clinics. Interested physicians may obtain this information from the society secretary or by writing direct to Dr. Gottlieb.

Dr. Sonne Announces Opening of Chronic Convalescent Center

The Kentuckiana Convalescent Center, which will occupy the old Jewish Hospital, was ready for a partial patient load around March 15, according to Irvin H. Sonne, Sr., M.D., medical director of the center.

When the hospital opened only the first floor was in use. However, as remodeling progresses, additional space will be utilized, Dr. Sonne said.

It was indicated that the Nurses Home at the Jewish hospital may be remodeled to accommodate alcoholics and mild mental cases at a later date. Registered personnel, under the supervision of Dr. Sonne, will be responsible for patient care.

AMA's New TV Series Ready for Distribution After June 1

The A.M.A.'s Bureau of Health Education is readying for presentation 25 television programs earmarked for airing over local TV stations some time after June 1.

Six of the programs comprise a "What to Do" series. These five-minute films include ones on hay fever, eye injury, skin problems, and dizziness. An additional six programs are designated as Script Clips: Six complete films with accompanying scripts to be narrated by a local physician. Among the subjects covered are industrial accidents, polio and the nervous system.

The final grouping consists of 13 rural health scripts to be used in live participation shows. Rabies, home pasteurization of milk, accidents in the home, and pure water supply from farm wells are only a few of the topics treated. These scripts were prepared in cooperation with the Council on Rural Health.

Clinic Plans Million-Dollar Building in Lexington

Construction of a million-dollar building is being planned by the Lexington Clinic, according to published reports. Its location would be near the "logical site" of a proposed University of Kentucky medical school, on an 8-acre tract adjacent to the U. of K. experimental farm.

William H. Pennington, M.D., Lexington, president of the clinic staff, said construction was expected to start within a year, and that the new clinic would provide space to expand several departments.

Plans for the medical center would include the construction of a new $5,000,000 St. Joseph's Hospital. It was understood that one of the principal reasons why construction of a new hospital was being considered at this time was because of the prohibitive cost of modernizing and fireproofing the present building.

Concentration of medical facilities in Lexington would be accomplished by such a construction program since the new Baptist Hospital is already in the vicinity of the U. of K. Experimental Station and the Good Samaritan Hospital is located fairly close, it was stated.

AMA to Discontinue "Acceptance" Program as Result of Study

Discontinuance of its "seal" or "acceptance" program has been announced by the AMA in its February Journal. This decision was reached after some months' study by the AMA councils and Board of Trustees of ways in which the AMA could increase its service to the public and the medical profession.

As a result, more time will be spent in supplying additional information on advances in diagnostic, curative, and preventive medicine.

In brief, the councils will "issue reports promptly and frequently on what is new in diagnostic, curative and preventive medicine; develop basic standards for classes of goods, and undertake educational efforts to insure as much as possible the utilization of the information they gather, digest and evaluate."

M.D.s See Two Medical T-V Shows

Physicians in and around Louisville had an opportunity to view two closed-circuit T-V medical programs during the month of February. The first dealt with coronary-artery disease, and the second with the use of penicillin in controlling "strep throat" infections. Both coast-to-coast hookups featured nationally-known authorities in their respective fields. The first such closed-circuit T-V program for physicians was presented during the KSMA meeting last September.

Blue Shield Names New Director

Appointment of John W. Castellucci as Executive Director of the Blue Shield Commission has been announced by L. Howard Schriver, M.D., commission president. Since joining the Blue Shield in 1943, Castellucci has been active in the establishment of the Veterans' Home-Town Care Plan. He has also lent his guidance to the Blue Shield's Physician Relations program.

Blue Cross Members Total 479,263

Net additions of 97,000 new members to Blue Cross and 133,000 to Blue Shield were reported at the annual meeting of the Blue Cross Plan of Kentucky held February 28 in Louisville. Reports also showed a total membership at the end of 1954 of 479,263. Cost of hospitalization from 1953 to 1954 rose $980,000, representing almost 90% of income paid out for member care.

New officers elected were: James F. Bleakley, president; Monsignor Charles A. Towell, 1st vice-president; James L. Moss, 2nd vice-president; Charles W. Allen, Jr., secretary; Ira J. Porter, treasurer, and D. Lane Tynes, executive director, all of Louisville.

Tour Reservations Deadline Soon

Accommodations for the four air tours of Europe arranged by the AMA to precede and follow the annual meeting at Atlantic City, June 6-10, are still available. Tours are scheduled to leave New York City on May 6, May 8, June 11, and June 13.

Cost of the tour is $1,598, and an initial deposit of $100 is required at the time of booking. The final payment is due April 8. All requests should be addressed to American Medical Association, Pre- and Post-Convention Tours, 5959 South Cicero Avenue, Chicago 38, Illinois.

Bowling Green Clinic to Expand

Plans for enlarging its present quarters have been announced by the Graves-Gilbert Clinic, Bowling Green, according to published reports. It is expected that the added space will be completed within two months, at which time one or two specialists may be added to the clinic's staff. No hospital facilities are contemplated.

Fund Honors the Late Dr. Cole

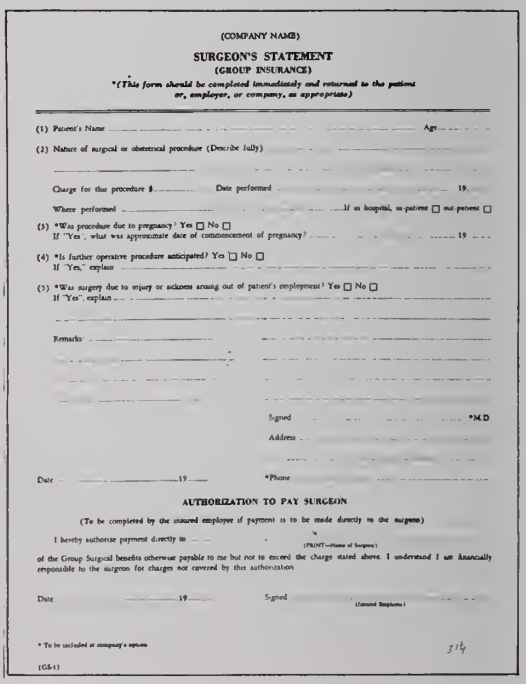
Establishment of a memorial fund to be known as "The Dr. Ernest Cole Trust" has been announced by the Clark County Hospital. Income from the trust will be used for charitable purposes in connection with the hospital's operation.

The fund was begun by relatives and friends shortly after the death in September of Ernest Cole, M.D., a physician who had served Clark County for half a century.

AMA Okays Claim Form

A simplified insurance claim form, drafted by a special committee of the Health Insurance Council, has been approved by the A.M.A.'s Council on Medical Service. The form is designed for use in administering surgical expense benefits under group insurance.

The Health Insurance Council hopes at a later date to have available six different blanks to accommodate the various types of benefits. However, to date, only the form shown below has received official approval.



(COMPANY NAME)

SURGEON'S STATEMENT
(GROUP INSURANCE)
(This form should be completed immediately and returned to the patient or, employer, or company, as appropriate)

(1) Patient's Name ..... Age .....

(2) Nature of surgical or obstetrical procedure (Describe fully) .....

Charge for this procedure $ ..... Date performed ..... 19 .....

Where performed ..... If in hospital, in-patient ☐ out-patient ☐

(3) *Was procedure due to pregnancy? Yes ☐ No ☐
If "Yes", what was approximate date of commencement of pregnancy? ..... 19 .....

(4) *Is further operative procedure anticipated? Yes ☐ No ☐
If "Yes," explain .....

(5) *Was surgery due to injury or sickness arising out of patient's employment? Yes ☐ No ☐
If "Yes", explain .....

Remarks .....

Signed ..... *M.D.
Address .....

Date ..... 19 ..... *Phone .....

AUTHORIZATION TO PAY SURGEON

(To be completed by the insured employee if payment is to be made directly to the surgeon)

I hereby authorize payment directly to ..... (PRINT—Name of Surgeon)

of the Group Surgical benefits otherwise payable to me but not to exceed the charge stated above. I understand I am financially responsible to the surgeon for charges not covered by this authorization.

Date ..... 19 ..... Signed .....
(Insured Employee)

* To be included at company's option.

(GS-1)

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W. Va. Academy of G. P. to Meet

Kentucky physicians are invited to attend the Third Annual Assembly of the West Virginia Academy of General Practice, which is being held in Charleston, West Virginia on April 16 and 17.

Louis H. Bauer, M.D., past president of the A.M.A., will be the banquet speaker. He will talk on "World Status of the General Practitioner." Other speakers, eminent in their fields, will address sessions on Pediatrics, Medicine, Obstetrics and Gynecology, and Surgery.

Iowa Hospitals File Petition

A petition for a declaratory judgment has been filed by the Iowa Hospital Association and 28 hospitals naming the Iowa State Board of Medical Examiners, the Iowa Association of Pathologists and the Attorney General of the State of Iowa as defendants. The hospital association is thereby seeking to challenge the February 19, 1954 interpretation of the Medical Practice Act by the former Attorney General.

The Iowa Hospital Association is requesting the court to declare that ownership, operation, and maintenance of laboratory facilities are an integral part of the lawful activities of a hospital and, therefore, they may charge and bill the patient for these services.

Middlesboro Builds New Clinic

A new clinic and hospital building is presently under construction in Middlesboro. The new building, which contains approximately 8,500 square feet of floor space, will replace the old Middlesboro Clinic and Hospital building in the center of town. Office space in the new clinic will be occupied by S. H. Flowers, M.D.; Charles D. Cawood, M.D., and Arch M. Carr, Jr., M.D.

SAMA to Hold Convention May 6-8

Delegates from the University of Louisville School of Medicine Chapter of the SAMA plan to attend the Fifth Annual Convention of the Student American Medical Association at the Sherman Hotel, Chicago, Ill., May 6-8.

Convention highlights include a banquet address on May 7 by Dr. You Chan Yang, Korean ambassador to the U. S. on "Medicine and Diplomacy," and the appearance on May 8 of Nicholas P. Dallis, M.D., creator of "Rex Morgan, M.D.," the popular newspaper feature.

Legislation to Aid Medical Schools

New legislation before the House of Representatives include H.R. 3297 and H.R. 3543, to provide federal aid to medical education. These bills, according to the AMA Washington Letter, would authorize a five year, $300 million construction aid program.

Half of this total would be earmarked for grants for the construction of new medical schools; the other half would be used for improvement and equipment for existing schools in the health field. One important stipulation is that applicants would first have to have been refused Hill-Burton grants.

Dr. Eller Announces Resignation

Resignation of C. Howe Eller, M.D., as Director of the Louisville-Jefferson County Health Department has been announced. He gave as the reason for resigning "the inadequate Board of Health budget," according to published reports.

Dr. Eller will become full-time chairman of the Department of Community Health at the University of Louisville School of Medicine. He has held this position on a part-time basis since coming to Louisville from Richmond, Va. in 1949.

Medical Foundation Talk Topic

The Kentucky Medical Foundation was the subject of the principal address by Coleman C. Johnston, M.D., Lexington, at the March 21 dinner meeting of the Jefferson County Medical Society at the Kentucky Hotel, R. Gradie Rowntree, M.D., president, stated.

The scientific program for the May 16 meeting of the society will be given by residents of General Hospital. The June 20 meeting will consist of four 15-minute presentations by the staff of the Veterans Administration Hospital. Any KSMA member visiting in Louisville at the time of these meetings is warmly invited to attend, Dr. Rowntree said.

Dr. Noer to Head Central Surgical

Rudolf J. Noer, M. D., professor and head of the Department of Surgery at the University of Louisville School of Medicine, was installed as president of the Central Surgical Association. The Central Surgical Association, which is made up of the midwestern states and Canada, held its 1955 meeting at the Drake Hotel on February 18. The association limits its membership to 200.

Honored On 90th Birthday

C. M. Thompson, M.D., who still maintains an office in Kings Mountain, was honored on his 90th birthday, February 19, with a party at his home.

Sixty-four years ago, following his graduation from the Medical College of Cincinnati, Dr. Thompson came to Lincoln County. He was a physician on horseback, later graduating to a horse and buggy and, finally, to an automobile. During his practice he has totaled more than 3,800 obstetrical cases.

Heart Group Hears Dr. Wright

All Kentucky physicians are invited to attend the annual dinner meeting of the Louisville Heart Association to be held Thursday, April 14, at the Pendennis Club, Louisville.

Past President of the American Heart Association, Irving S. Wright, M.D., Professor of Clinical Medicine at Cornell University, New York City, will be the featured speaker. He will talk on "The Challenge of Heart Disease and How It is Being Met." Reservations should be made by noon of April 12 at the Louisville Heart Association office, 414 Columbia Building.

Committee Plans '55 Drive

Preliminary plans for the 1955 Diabetes Detection Drive were discussed at a meeting of the KSMA Diabetes Committee held at the Brown Hotel on Thursday, March 24. In addition, results of the 1954 Drive were reviewed, according to Carlisle Morse, M.D., committee chairman.

Through the combined efforts of the various county medical society diabetes committees and the KSMA committee, approximately 45,000 persons received free diabetes tests, reports showed. Of this number, 1,414 have been reported to date as positive, and 181 have been reported to date as newly-proved diabetics.

Three new program series for radio transmission have been announced by the A.M.A.'s Bureau of Health Education. Available about April 15 will be a series of 13 medical "whodunits" entitled, "Dr. Tim Detective." A second series, based on A.M.A.'s week-day Chicago television program, "The Doctor Answers," will be released about June 15. A third series will be completed around September 15. All may be used by state and county medical societies over local radio stations.

MEDICINE AND VOLUNTARY HEALTH INSURANCE

(Continued from page 324)

Rather than "choose up sides" perhaps we would do well to concentrate on the art and science of medicine and try to develop a better appreciation of all worthy types of plans.

You may raise the question of why the profession should maintain a neutral position when it was responsible for establishing some of the plans now in existence. This is a proper question. The answer lies primarily in the fact that, when the profession created some of these plans, there was no experience in this field.

Insurance companies were then hesitant to experiment, due to the fact that they felt they were administrators of funds which could not be dissipated in unauthorized ventures. Perhaps the easiest way to explain this would be to assume that an insured person presenting a legitimate claim were told that the company had spent the money experimenting in a new type of insurance.

The basic experimentation has been fairly well accomplished. Perhaps the medical profession can be justifiably proud of its efforts which made the earlier experiments possible. Increasingly the insurance companies have experimented in new types of coverage—notably in the field of catastrophic coverage—or major medical expense benefits. The companies have experimented on a controlled basis and are continuing to do so to the extent that they do not jeopardize their solvency.

In summary, I think the medical profession should support *all sound* health insurance programs. That support should be somewhat as follows:

1. Any voluntary effort is superior to any form of compulsory tax scheme whether any such scheme is a direct or indirect tax.

2. The "support" should be in the nature of an enlightened interest in the *whole* development rather than a self-interest in any one plan or any one type of plan. These mechanisms should be considered as means of extending financial aid to insured individuals rather than as a windfall or boon to the profession.

3. I believe that health insurance should be considered *one* of the desirable methods of helping finance some of the insurable costs of health care as distinguished from *the* method of financing *all* costs.

4. Moreover, the existence of insurance should *never* be a basis on which a physician should elevate his fee for a professional service. Insurance is not an inexhaustible, remote source of funds. If costs are increased due to insurance, the insurance premiums must be increased and the very purpose of the insurance is defeated.

5. The support of the medical profession should be active only in the academic sense. It should not include either direct or indirect activity in selling or interpreting insurance contracts.

6. In the final analysis, we as physicians are dedicated to the health needs of the public. In discharging this responsibility we cannot be blind to the economic problems of the patient. The economic benefits to the professions are, and should be, secondary. If we fulfill our obligations in the health field with a sympathetic understanding of the economic problems, then our own house will be in order. In so doing we can remain an unregimented profession and continue to serve in the public interest.

Pertinent Paragraphs

Copies of the revised edition of the "Union Health Centers" booklet are now available on request from the Headquarters Office. The 48-page pamphlet, describing 17 union-sponsored health centers, was prepared by the A.M.A. Committee on Medical Care for Industrial Workers, a joint committee of the Councils on Medical Service and Industrial Health.

A short intensive course on the laboratory diagnosis and pathology of parasitic infections will be presented at the Louisiana State University School of Medicine in New Orleans, August 15-27. The course will include lectures, extensive demonstrations, films and supervised individual laboratory study. The fee for the course is $50.00 and registration is limited.

Two new booklets dealing with physicians placement service as it applies to both the physician and the community have been announced by the A.M.A.'s Council on Medical Service. The first, "Physicians Placement Service—1955," gives special attention to services maintained by, or in cooperation with, state medical societies. The second discusses in detail what other communities have done to attract physicians. These booklets will be available through the KSMA Headquarters Office.

The Eleventh Annual Congress and Graduate Instructional Course in Allergy of The American College of Allergists will be held April 25 through 30, in Chicago at the Morrison Hotel. Courses during the first three days are designed to interest physicians in general practice and last two days will be devoted to reports and papers of a more advanced nature.

In a closed-circuit television talk to the nation's physicians on February 9, President Eisenhower stressed the fact that the role played by the government in matters concerning national health should be of a supplemental nature. His remarks were made in connection with a "Medical Journal of the Air" telecast to 32 cities.

The A.M.A. has commended President Eisenhower on his health message to the 84th Congress. It was noted that most areas touched upon are those in which the medical profession has been concentrating much of its activity. He was particularly applauded for recognizing "the primacy of local and state responsibility" and encouraging "private efforts with private funds."

A scholarship to a young Canadian or American surgeon who wishes to study abroad is being offered by the International College of Surgeons through the generosity of the Woman's Auxiliary of the United States and Canadian Sections of the College, according to a letter sent out by Horace E. Turner, M.D., Chicago, chairman of the Scholarship Committee. The scholarship will be in the amount of $3,000 for traveling and living expenses for one year. For more specific details write The Scholarship Committee, International College of Surgeons, 1516 Lake Shore Drive, Chicago.

A sign of the times perhaps is the announcement that a Miami psychiatrist, Jacques S. Gottlieb, M.D., has been awarded the highest-paid job in the history of Michigan State government. His $25,000 a year stipend as director of the Lafayette Clinic in Detroit will exceed that of the governor.

Five pre-nurse clubs have been organized by Miss Marion B. Sprague, director of nurses at the Pikeville Methodist Hospital, at the following high schools: Belfry, Johns Creek, Mullins, Elkhorn and Virgie. In all of these schools scholarships available through the Methodist Hospital have been explained.

News Items

Samuel A. Rector, M.D. has announced that he has closed his office in Munfordville. As of March 1, 1955, he has entered practice with **E. K. Hughes, M. D.,** Pleasure Ridge Park. Dr. Rector graduated from the University of Louisville School of Medicine in 1951.

Russell E. White, Lexington, has assumed his new duties as managing-director of the Kentucky Medical Foundation, with offices in Lexington. A graduate of the University of Kentucky in 1947, he has held various executive positions with the Kentucky River Coal Company.

Charles L. Nord, M.D., of the United States Public Health Service, has recently assumed the post of psychiatrist at the Federal Correctional Institution at Summit. A graduate of the University of Michigan School of Medicine, Dr. Nord received further psychiatric training there. He had been certified as a Specialist by the American Board of Psychiatry and Neurology in December, 1953.

Robert Lee Black, retiring Chief of the Medical Service Corps of the Army, has been appointed Administrator of the Memorial Medical Center at Williamson, West Virginia, it has been announced. He will also have overall responsibility for the operation of affiliated hospitals at McDowell and Pikeville, Kentucky.

J. Frank W. Stewart, M.D., Assistant Medical Director of Waverly Hills Sanatorium, has been appointed Superintendent and Medical Director of Hillcrest Tuberculosis Sanatorium at Vincennes, Indiana, effective May 15. Dr. Stewart has been a member of the staff at Waverly since 1945 and a member of the faculty of the University of Louisville School of Medicine since 1946.

Erwin Asriel, M.D., a native of Austria, has been called to active duty with the U. S. Medical Corps. Dr. Asriel, who has been practicing in Paris, will report to Camp Kilmer, N. J. for embarkation.

Milton O. Beebe, Jr., M.D., is now associated in the practice of medicine with Hershell Murray, M.D., in West Liberty. Dr. Beebe is a 1940 graduate of Rush Medical School.

Harold W. Baker, M.D., has opened an office in Louisville for the practice of gynecology. Dr. Baker graduated from Johns Hopkins University School of Medicine in 1948, and interned at Vanderbilt Hospital, Nashville, Tenn. In addition, he has completed residencies at Vanderbilt and Johns Hopkins.

John P. Bell, M.D.; Harold Eskind, M.D.; A. B. Ortner, M.D.; Irving Perlstein, M.D., and John J. Wolfe, M.D., all of Louisville, participated in a panel discussion Thursday, February 10, at the B'rith Sholom Temple. The topic under discussion was whether or not a physician should tell a patient that he has a fatal ailment.

Stuart H. Light, M.D., formerly of Chicago, Ill., has moved to Ashland and is associated in the offices of **H. E. Martin, M.D.** He graduated from the Medical College of Virginia in 1947, and interned at the Southern Baptist Hospital, New Orleans, La. Dr. Light completed his urology training at Hines Hospital, Chicago. For two years he served with the U. S. Army in Frankfurt, Germany and was chief of urology at the 97th General Hospital there.

Charles F. Martin, M.D., Winchester, has been elected a member of the board of directors of the Kentucky Rehabilitation Center, Inc., Lexington. The Center, a non-profit organization, began operation in September, 1954.

Robert A. Orr, M.D., Mayfield, was recently awarded the highest regional Boy Scout award which can be conferred upon an adult—the "Silver Beaver" award. Dr. Orr is medical director of the Fuller-Gilliam Hospital.

E. F. Hall, M.D., of Paris, has been appointed health director for the Daviess County Health Department, at Owensboro. Dr. Hall is a 1951 graduate of the University of Louisville School of Medicine.

W. F. Boyer, M.D., former secretary of the Cumberland County Medical Society, is now practicing in Fayetteville, Tenn. Dr. Boyer graduated from the University of Louisville Medical School in 1951.

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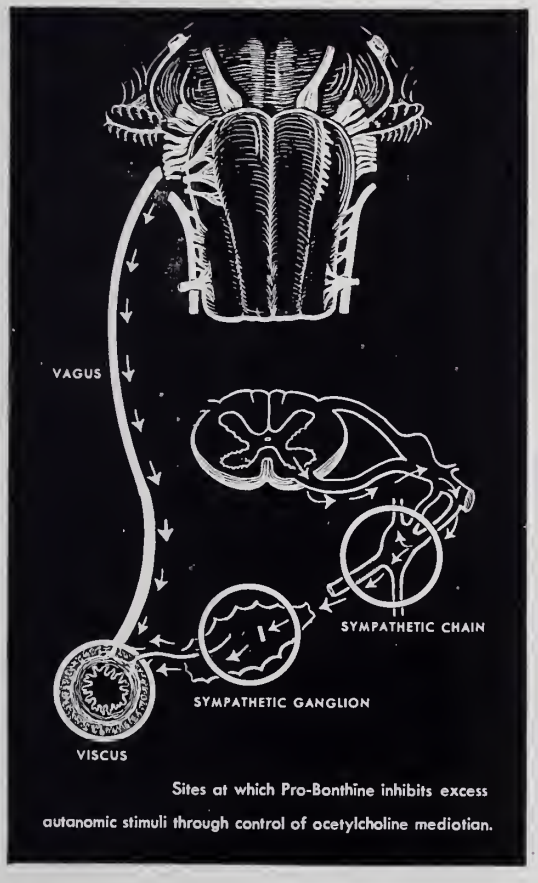

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1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

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Henry P. Lawrence, M.D., has moved his office from Hawesville to Lewisport, after a decade of service in the former community. The move will enable him to make use of increased facilities.

Kenneth M. Eblen, M.D., has resumed his practice in Henderson after two years of duty with the Navy, during which time he served aboard the Navy transport the USS General William Mitchell.

Lloyd D. Mayer, M.D., Lexington, has been elected to fellowship by the American Academy of Allergy at their annual meeting in New York City recently. Dr. Mayer graduated from the University of Louisville Medical School in 1944. He formerly served as an instructor of medicine at the University of Pittsburgh School of Medicine.

Arthur H. Keeney, M.D., director of eye research at the University of Louisville School of Medicine, has been awarded the degree of doctor of medical science from the University of Pennsylvania Graduate School of Medicine, Philadelphia. A 1944 graduate of the University of Louisville School of Medicine, Dr. Keeney studied at the Pennsylvania Graduate School in 1948-49.

McHenry S. Brewer, M.D., recently opened offices in Louisville. Dr. Brewer graduated from the University of Louisville School of Medicine in 1946, and interned at the New York Presbyterian Hospital. From 1947 to 1949 he served in the United States Army, following which he served a residency in the New York Presbyterian Hospital. His practice is limited to general surgery.

B. F. Shields, M.D., Shelbyville, has been appointed to the Jurisprudence Committee of the Kentucky Bankers Association, by **L. M. Campbell,** Ashland, president of the bankers group. Dr. Shields is a director of the Peoples Bank at Taylorsville.

Daniel Lee Bower, M.D. has announced the opening of offices in Williamsburg. A native of Southern Indiana, Dr. Bower graduated from Indiana University School of Medicine in 1926. Since his internship at St. Elizabeth Hospital, Lafayette, Indiana, he has practiced in Indianapolis, Indiana; Los Angeles, California, and for four years in Barbourville, Ky.

In Memoriam

WILLIAM H. SMITH, M. D.

Danville

1877 - 1955

Dr. Smith, 78, who practiced medicine for more than 50 years in Danville, died on February 15, 1955 at Ephraim McDowell Memorial Hospital, Danville.

Dr. Smith, a graduate of Centre College and of Cornell University Medical College, was born in Maysville.

For fifteen years Dr. Smith served as chairman of the Boyle County Board of Health. He was also the Louisville & Nashville Railroad's surgeon in his county.

THOMAS PARKER GRAY, M. D.

Waverly

1872 - 1955

Dr. Gray, 83, a practicing physician in Waverly for 53 years, died at his home on February 8, 1955.

An honor student, Dr. Gray graduated from the University of Louisville Department of Medicine in 1901, and was one of the first graduates to receive a certificate in surgery from that institution. He was a native of Clark County, Indiana.

F. W. URTON, M. D.

St. Petersburg, Fla.

1894 - 1954

Dr. Urton, a former eye, ear, nose and throat specialist in Louisville, died in St. Petersburg, Florida, December 10, 1954, at the age of 60.

While practicing in Louisville, Dr. Urton had offices in the Francis Building. He moved to Florida two years ago because of ill health. A native of Sweet Springs, Missouri, he was graduated from the University of Louisville Medical Department in 1921, and began his practice at Irvine, Kentucky.

Later he went to New York City, serving on the staff of the Brooklyn Eye, Ear, Nose and Thoat Hospital. He returned to Louisville in 1920. He was a former member of the University of Louisville School of Medicine faculty.

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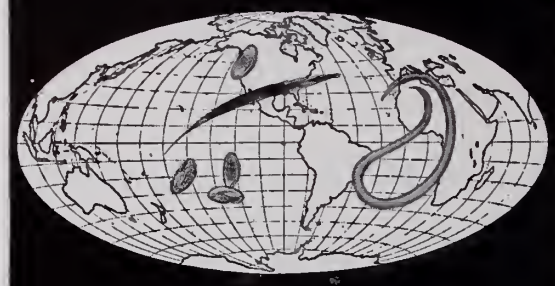

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WILLIAM H. WALKER, M. D.

Henderson

1875 - 1955

Dr. Walker, 80, retired physician, died at his home in Henderson on February 9, 1955, following a long illness.

Prior to his retirement 15 years ago, Dr. Walker practiced in Kansas City. He had received his golden anniversary medal from the Missouri Medical Society after completing 50 years' practice.

A native of Henderson County, Dr. Walker was a graduate of the Louisville College of Medicine.

WILLIAM G. SMITH, M. D.

Scramento, Cal.

1880 - 1955

Dr. Smith, who was born and reared in Meade County, Kentucky, died in Sacramento, California in February, 1955. Until his retirement, he had practiced medicine in Breckinridge, Colorado. He was a graduate of the University of Louisville Department of Medicine.

GEORGE M. McLEISH, M. D.

Louisville

1885 - 1955

Dr. McLeish, 70, a practicing physician in Louisville for nearly 40 years, died February 18, 1955, after an illness of 2½ years.

Dr. McLeish graduated from the University of Louisville Department of Medicine in 1912. He was one of the first surgeons to land in France with American troops in World War I.

A native of New Albany, Indiana, Dr. McLeish was a member of the Jefferson County Medical Society and the Kentucky State Medical Association.

WILLIAM D. SPARROW, M. D.

Burgin

1877 - 1955

Dr. Sparrow, 78, a practicing physician in Mercer County for almost 40 years, died at a Harrodsburg hospital on February 18, 1955, after a long illness.

Dr. Sparrow, a native of Anderson County, graduated from the University of Louisville Department of Medicine in 1904, after which he took post-graduate work in obstetrics and gynecology. Prior to his illness, he had delivered 7,099 babies.

Dr. Sparrow began his practice in Boyle County 50 years ago.

J. E. BAKER, M. D.

Hopkinsville

1920 - 1954

Dr. Baker, Hopkinsville, died on December 9, 1954. He was a graduate of the Vanderbilt School of Medicine in 1945.

He interned at Touro Infirmary, New Orleans, 1945-1946, and served in the army for two years following this. After his service in the army, he returned to Touro and served a residency for two years.

CARL WEIDNER, JR., M.D.

Louisville

1886 - 1955

Dr. Weidner, 69, a physician in Louisville for more than 40 years, died at his home in Louisville on March 16, 1955.

A general practitioner, Dr. Weidner graduated from the University of Louisville School of Medicine in 1909, and later studied at the Mayo Clinic and in Germany. During World War I he attended a special X-ray school set up by the Government at West Baden, Ind.

He was a member of the Jefferson County Medical Society and the Kentucky State Medical Association.

The first baby whose birth was covered by the Blue Cross hospital service plan, Mrs. Ann Woodard Reid, of North Carolina, now has a Blue Cross baby of her own, born February 17. Since Mrs. Reid's birth in December, 1933, 13,000,000 births have been paid for through Blue Cross hospital care prepayment, according to Blue Cross statistics.

Physicians on the staff of St. Elizabeth Hospital, Covington, have presented the hospital with a heart defibrillator machine and a heart pace-maker machine. This equipment represents the latest in life-saving measures which can be taken in heart emergencies.

Legislation designed by the Pentagon for long-range procurement of physicians and dentists as career officers is incorporated in bill H.R. 4645, according to the AMA Washington Letter. Students would be paid a "monthly retainer fee" (not exceeding $133), plus school tuition, fees, and laboratory expenses. In return, students would be required to accept eight years' reserve duty and to serve for three years on active duty. To be released from such requirement, a student would have to reimburse the government, with interest, for all funds expended in his behalf.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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County Society Reports

MADISON

The Madison County Medical Society met at the Berea College Hospital, Berea, on February 10, 1955. Eleven members were in attendance.

"Medical Jurisprudence According to Laws in Kentucky" was the subject of an interesting talk by George Ross, Richmond lawyer. He reviewed medical legal law as found in the Kentucky statute regarding the practice of medicine.

Max E. Blue, M.D., Secretary

BOYD COUNTY

The Boyd County Medical Society met on February 1, 1955 at the Henry Clay Hotel, Ashland, with 25 members present.

Stuart H. Light, M.D., formerly of Chicago, Ill., who is now associated in the offices of H. E. Martin, M.D., was accepted for membership.

The society voted to investigate incorporation of the county medical society in order to protect individual members, especially their estate on decease.

May 15 was voted the deadline for members to correct nameplates, telephone listings, etc., so that "M.D." would follow the name of the physician.

During the scientific program A. L. Allen, M.D., Ashland, discussed Chest Diseases, using slides to illustrate his talk.

GRANT

The Grant County Medical Society held its regular meeting Wednesday, January 19, 1955, at the Hotel Donald.

The society authorized the secretary to request the mobile Cancer Clinic for May, 1955, with April as second choice.

The following committee appointments were made by O. A. Cull, M.D., president: C. C. Waldrop, M.D., chairman, Committee on Diabetes; F. R. Scroggin, M.D., Emergency Medical Service; Lenore Chipman, M.D., Legislation; Virginia K. Kratz, M.D., Rural Health, and Dr. Cull, Public Relations.

The motion was made and carried that Dr.

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Cull serve as delegate to the K.S.M.A. Annual Meeting and that Dr. Chipman be the alternate delegate.

Following the business session, the group heard an hour-long program of tape recordings from the audio-digest series.

Guests of the society were Robert Kratz, M.D., Everett Chipman, and Mrs. Waldrop.

Virginia D. Kratz, M.D., Secretary

CALLOWAY

The Calloway County Medical Society met in the chapel of the Murray Hospital, Murray, on January 4, 1955, with Conrad H. Jones, M.D., president, presiding.

It was suggested by Hugh Houston, M.D., that whoever attends the Kentucky State Medical Association meeting in Louisville this year act as alternate delegate since this was not an elective office. All agreed.

The following additional members were present: A. D. Butterworth, M.D.; Charles Clark, M.D.; Robert Hahs, M.D.; C. C. Lowry, M.D.; O. H. Mason, M.D.; J. A. Outland, M.D.; John C. Quertermous, M.D.; Kenneth Ross, M.D.; Charles L. Tuttle, M.D.; Birdsall Carle, M.D., and Administrator Warming.

McCRACKEN

The McCracken County Medical Society held its regular monthly meeting Wednesday, January 26, 1955, with Merle Fowler, M.D., president, presiding.

Winfield Stryker, M.D., gave the scientific program, speaking on "Erythroblastosis," followed by a question and answer period.

At the business meeting which followed, R. W. Robertson, M.D., reported that the KSMA has advised local societies to avoid endorsement of the resolution by the Galen Club concerning Veterans Hospital Care for non-service connected disability. It was moved and passed that this advice be accepted.

George Widener, M.D., chairman of the Public Relations Committee, announced that medical forums would be started in the near future.

A letter from the Community Chest was read by Keith Sloan, M.D. In complimenting the physicians of McCracken County for their contributions, the letter stated that the group made the largest donation of any of the professional groups in the county.

Appointed to a Resolution Committee were W. P. Hall, M.D., chairman; E. W. Jackson, M.D., and Eugene Blake, M.D. The committee

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will compose a necrology of B. C. Overby, M.D. for presentation to his wife, the KSMA Journal and the county society.

Dr. Fowler asked for a financial report by the secretary to be presented at the next meeting for consideration of the utilization of some of the available funds.

Walter R. Johnson, M.D., Secretary

BOURBON COUNTY

The Bourbon County Medical Society was host to a meeting of physicians from 10 Kentucky counties at the State Tuberculosis Hospital, Paris, on Tuesday, February 8, 1955. William H. Cox, M.D., society president, presided at the meeting which was attended by 51 physicians.

W. Duane Jones, M.D., Ashland, discussed the generally accepted principles in the chemotherapy of pulmonary disease, and Robert J. Dancey, M.D., Madisonville, discussed the diagnosis of chronic diseases of the lung.

Dinner was served in the hospital cafeteria preceding the meeting.

Marvin B. Dillon, M.D., Secretary

SCOTT

The Scott County Medical Society met on Thursday, February 3, 1955, at the John Graves Ford Memorial Hospital in Georgetown.

Early completion of work on the old part of the hospital was brought up for discussion. After several expressions of opinion, a committee was appointed to investigate the statute covering the appointment of trustees for a county hospital and to report at the next meeting. J. C. Cantrill, M.D., president, appointed F. W. Wilt, M.D., and H. G. Wells, M.D., to serve on the committee.

The following additional members were present: W. S. Allphin, M.D.; E. C. Barlow, M.D., C. R. Lewis, M.D., H. V. Johnson, M.D., and A. F. Smith, M.D.

SCOTT

The Scott County Medical Society met at the John Graves Ford Memorial Hospital in Georgetown on March 4, 1955.

Claude W. Trapp, Jr., M.D., of Lexington, was the guest speaker. Dr. Trapp spoke on early signs and symptoms of some of the common diseases of the eye. His paper was both timely and instructive.

During the business session, F. W. Wilt, M.D., gave a report on the work being done by the

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Civil Defense Committee of the Medical Society and distributed some literature.

Other members present were: J. Campbell Cantrill, M.D., H. G. Wells, M.D., E. C. Barlow, M.D., C. R. Lewis, M.D., W. S. Allphin, M.D., A. F. Smith, M.D., and H. V. Johnson, M.D.

H. V. Johnson, M.D., Secretary

PIKE

The Pike County Medical Society held its regular monthly meeting on January 18, 1955, in Pikeville, with approximately 25 members present. The meeting was called to order by R. W. Allen, M.D., president.

Dr. Allen reported that a plaque for Grievance Committee participating physicians is being drawn up. This plaque will be distributed to be posted by physicians at their discretion.

W. B. Cassady, M.D., introduced Andrew Moore, M.D., plastic surgeon from Lexington, who spoke on plastic surgery in general. Dr. Moore, a former student of J. Barrett Brown, M.D., of St. Louis, illustrated his discussion of the use of plastic surgery in treating congenital conditions, malignancy and burns with kodachrome slides.

G. N. Combs, M.D., Secretary

SHELBY-OLDHAM

The Shelby-Oldham County Medical Society met Thursday, February 24, 1955, at the Stone Inn, Simpsonville. Eighteen members were in attendance.

George B. Sanders, M.D., Louisville, spoke on the subject, "Should Radical Mastectomy be done for all Breast Cancer?" His talk was followed by a general discussion of the topic by many of those present.

Important business transacted included consideration of the work of the Committee in Colored OB Cases, the Committee for Consideration of Fees and the Committee for Increasing Scope of Use of Shelby County Hospital.

C. C. Risk, D.D.S., Secretary.

LETCHER

The Letcher County Medical-Dental Society held its bi-monthly meeting on Tuesday, February 25, 1955, in Whitesburg. Owen Pigman, M.D., president, presided.

Discussion centered around the possible polio vaccination program for 1955. Although definite plans cannot be made until official ap-

proval for a nationwide program is received around April 15, R. Dow Collins, M.D., was appointed administrative head of such a program, pending its approval. Such vaccination would be limited to the first and second grades.

The rest of the evening was devoted to a discussion of staff physicians for the Whitesburg Memorial Hospital. The hospital hopes to open by January, 1956.

In addition to the above the following members were present: Carl Pigman, M.D., A. B. Carter, M.D., E. G. Skaggs, M.D., and Fred L. Coffey, associate member.

R. Dow Collins, M.D., Secretary

MUHLENBERG

The Muhlenberg County Medical Society held a joint meeting with the Medical Staff of the Muhlenberg Community Hospital, on Friday, March 4. C. J. Shipp, M.D., society president, presided.

A letter was received from the appropriate KSMA committee requesting proper planning of Emergency Medical Care. Dr. Shipp reported that he has the subject under study.

Hospital Administrator Floyd Krohn called attention of the medical staff to the regulation providing that patient records be removed from the hospital only on receipt signed by the attending physician. The necessity of admission diagnosis was also stressed.

A series of movies—"The Role of the Ion," "Gentran," and "Travert"—provided a brief refresher course in osmotic and crystalloid hemodynamics.

G. F. Brockman, M.D., Secretary

WARREN-EDMONSON

The Warren-Edmonson County Medical Society held its regular monthly meeting on Tuesday, January 11, 1955, with John Y. Barbee, M.D., president, presiding.

The society went on record as approving the visits of a consulting cardiologist at the Heart Clinic, the first to be held February 4, with Joe Little, M.D., being present. Continuance of the Cancer Clinic at the hospital under the supervision of Henry Harris, M.D., was also approved.

Dues of one hundred dollars per member, plus the amount necessary to pay for gifts for hospital personnel were approved.

The scientific program consisted of three movies by Dr. Hillman, of Nashville, on several orthopedic problems in the older age group.

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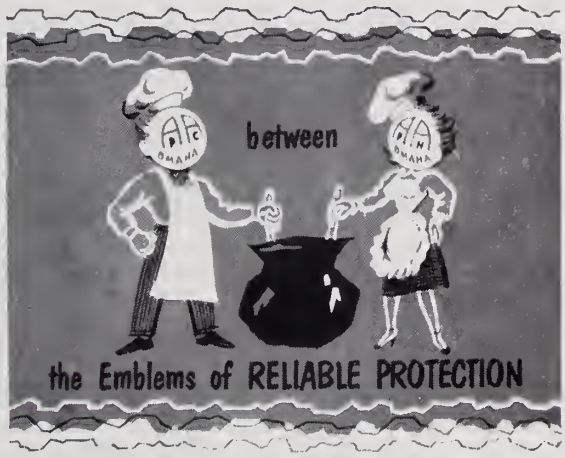

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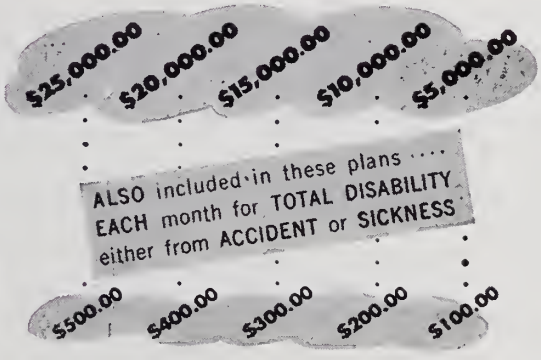

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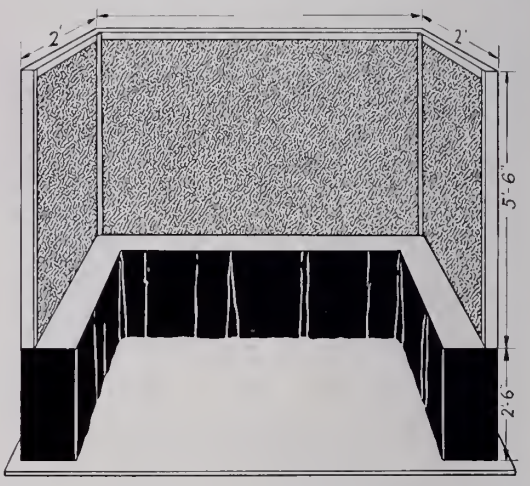

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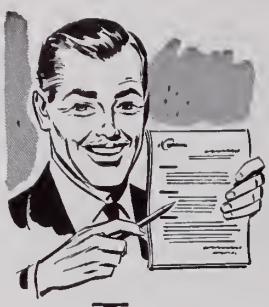

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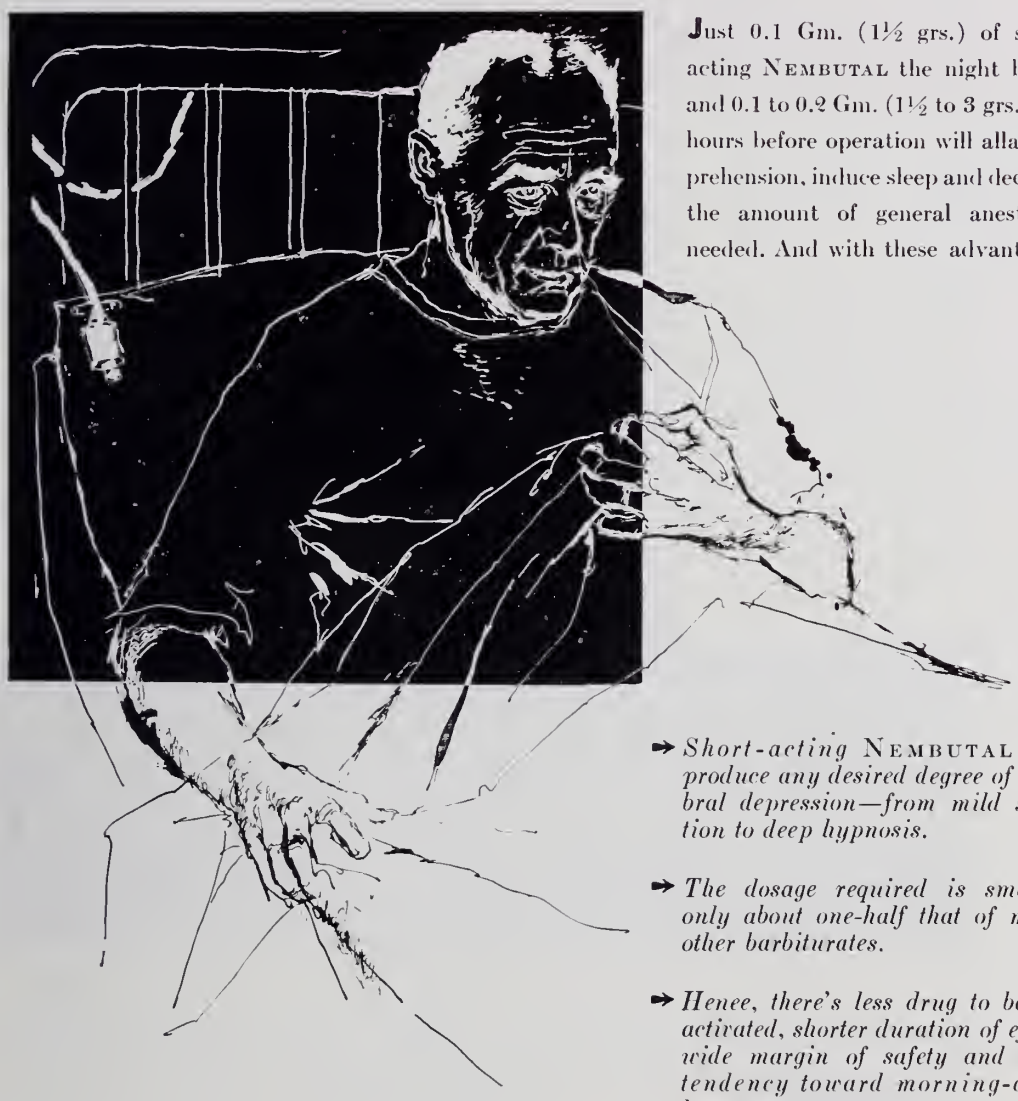

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(1) Butler, A. M., and Wolman, I. J.: Quart. Rev. Pediat. 9: 63, 1954. (2) Moore, I. H.: Journal-Lancet 74: 80, 1954. (3) Collins-Williams, C.: J. Pediat. 45: 337, 1954. (4) Clein, N. W.: Ann. Allergy 9: 195, 1951.

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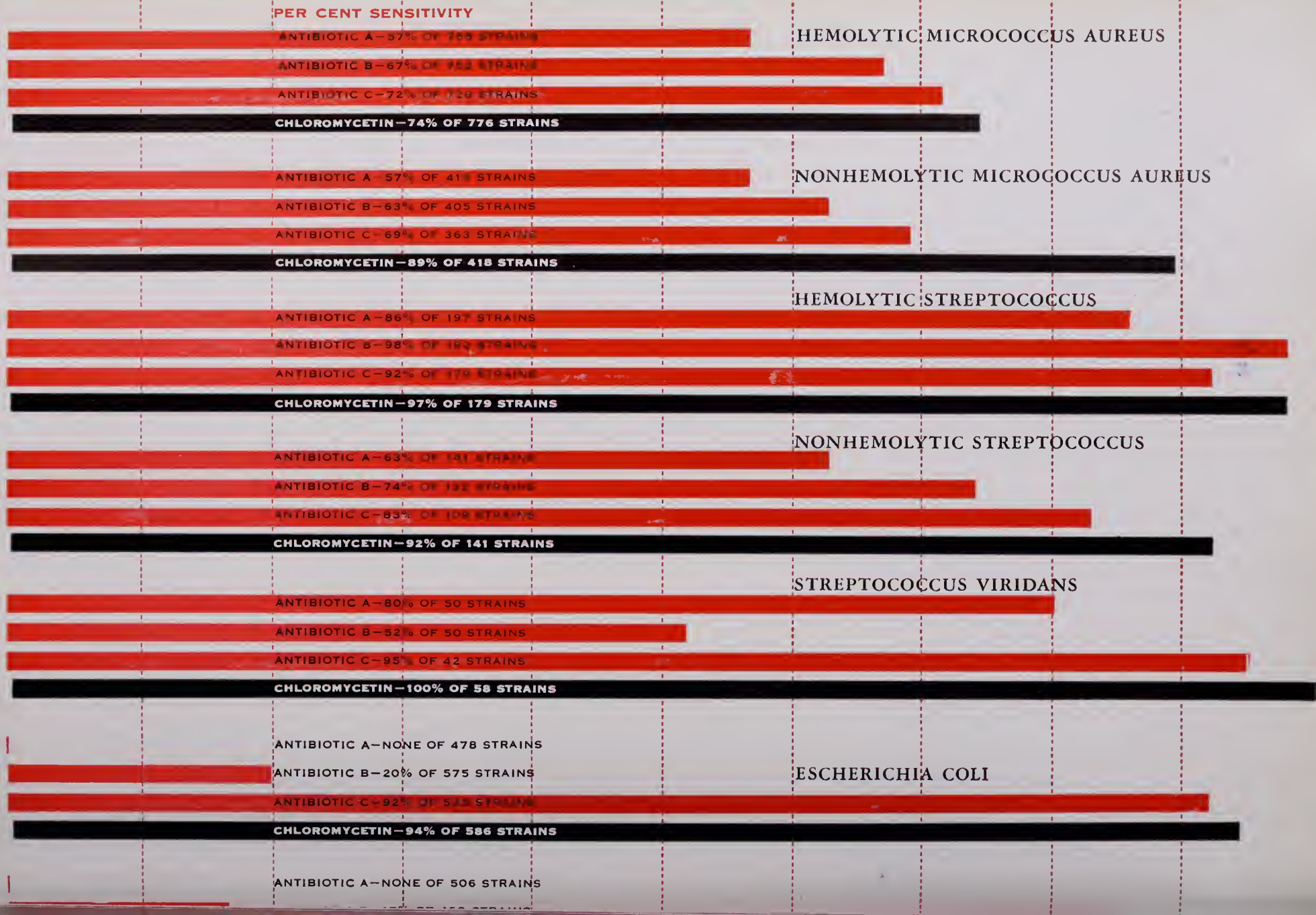
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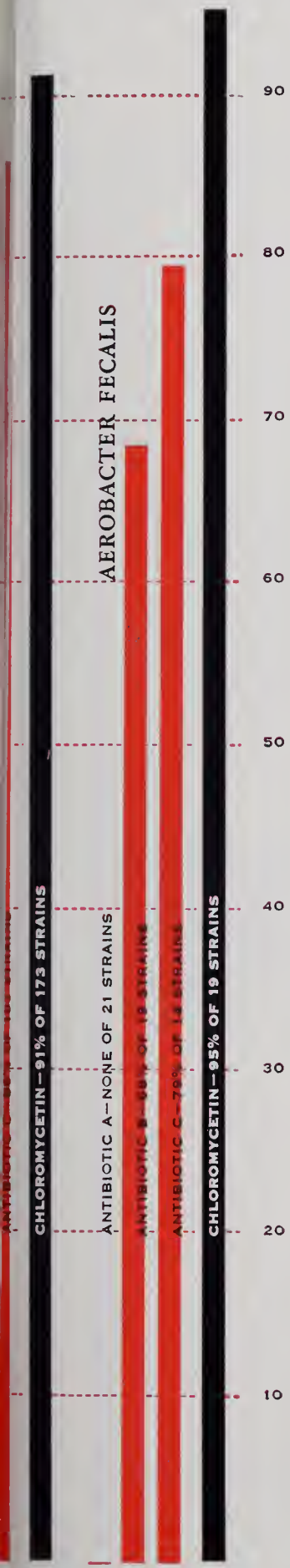

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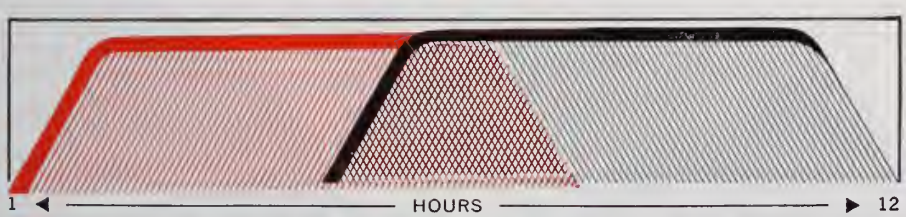

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President's Page

Medicine, its science and its arts, is such an all consuming calling that there is a tendency toward a certain narrowing among its devotees. Yet medicine touches, influences and is influenced by almost everything. Perspective is the thing currently and historically that teaches us respect of others and rebounds favorably to us.

Inevitably in the practice of medicine, one will be in contact from time to time with ministers of the gospel of many denominations. Anciently, it was common that one individual represented both professions. We have so much then of a common heritage. How well do we understand this man in his work, his problems, his victories and his aspirations?

A more mundane group, the lawyers, we will be certain to have a co-professional business with. They are usually busy, intelligent, well-educated and ambitious men. One can profit much by some understanding of their viewpoint.

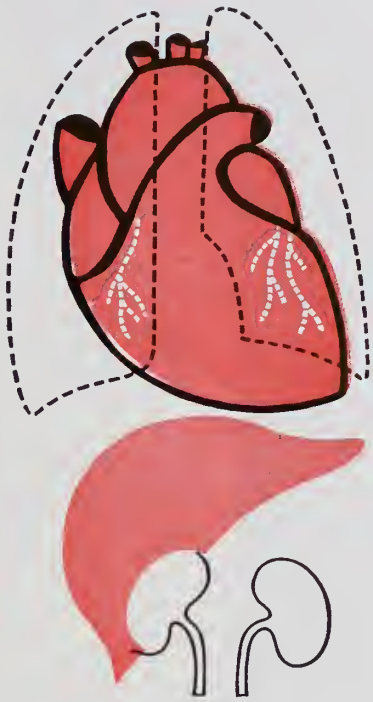
The business man, the military man, the laborer, the banker—all we will meet and all have much to interest us. Problems will come up germane to both their affairs and ours that call for a broad out-look that comes only from sympathetic understanding.

Probably the closest of all of these should be those who devote their lives to agriculture. Here we have a broad field of biology that we of all should understand in a general way and respect to the fullest. Here our basic training should give us unusual insight. Veterinary practice, plant biology, genetics, soil and bacteria problems, should excite a familiar ring.

There is much room for mutual understanding and co-operation. Rapport results from such a genuine interest in the affairs of others and promotes the well-being of all.

JESSE T. FUNK, M. D.
Vice-President, Western District
Kentucky State Medical Association

know your diuretic



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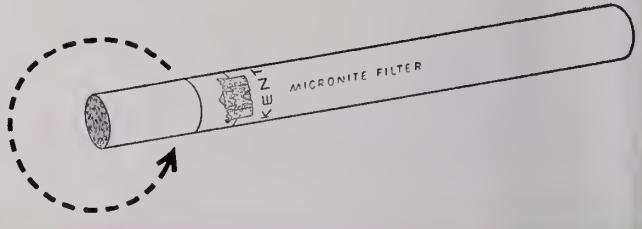

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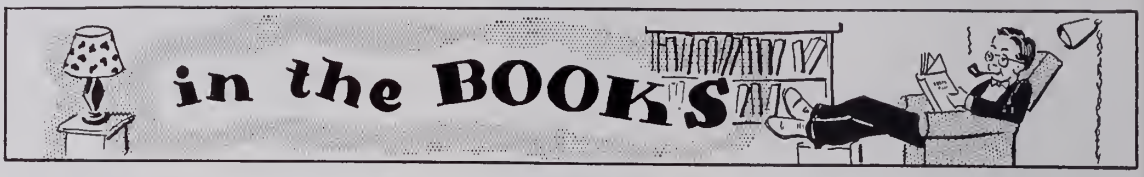

ANTIBIOTICS AND ANTIBIOTIC THERAPY: by Allen Hussar, M. D., F.A.C.P. and Howard L. Holley, M. D., F.A.C.P.; The Macmillan Company, New York; 475 pages; $6.00

This book represents an attempt on the part of the authors to present under one cover a more or less panoramic view of the present status of the antibiotic agents available at the time of its writing. It is neither a textbook nor a reference volume. It is truly a manual which should prove useful primarily to medical students and general practitioners.

The subject matter is presented in three sections. The first deals with broad generalities concerning mode of action, antimicrobial spectrum, complications, resistance, cross-resistance, and other general aspects of antibiotic therapy. Part 2 deals with a description of each of the currently available antibiotics together with comments concerning the bacteriologic and pharmacologic properties of the substance. The dose forms available and methods of administration are included in this part. The third section deals with the antibiotic therapy of specific bacterial infections and diseases. The discussion of each disease is concluded by a brief statement concerning the drug of choice for the particular disease.

In the last part of the third section, the authors change from dealing with specific diseases to a discussion of infections in specialized fields. In other words, they elect to discuss the use of the antibiotic in different specialties, such as surgery, obstetrics, gynecology, etc. This portion of the discussion suffers in part from brevity. Obviously in a book of this kind, it is difficult to cover each medical and surgical specialty.

Each chapter contains a bibliography in which the authors list representative articles dealing with the subject under discussion.

In some parts the monograph contains rather contradictory statements. For example, the authors present a very adequate discussion of the possible hazard of the administration of procaine penicillin to patients who have a history of asthma; however, a number of pages later they recommend the use of 600,000 units of procaine penicillin in the treatment of the common cold in patients who develop asthma with respiratory infections. In general, however, this book is well written, the style of writing is clear and concise, and, in general, it is factual.

Wallace E. Herrell, M. D.

PUBLIC RELATIONS IN MEDICAL PRACTICE, by James E. Bryan; Williams & Wilkins, Baltimore, Md.; 300 pages; Price $5.00

"Oh wad some power the giftie gie us
To see oursels as others see us!
It wad frae monie a blunder free us,
An' foolish notion."

Thus did Bobbie Burns put an unerring finger on the first requisite of good public relations.

Mr. Bryan's book does more than set forth specific practical suggestions for good PR. It gives the doctor a chance to see himself as others see him through a glass held by one uniquely fitted to do so.

The author has had 25 years of intimate association with the profession and is recognized nationally in the realm of socio-economic and public relations aspects of medical practice. His own observations and those of countless other experts on whom he freely draws are useful and thought provoking.

The first half of the book brings rare insight to the personal relationships between physician and patient. From this Mr. Bryan goes on to a practical examination of patient education, itemization of bills, adjustments, delinquent accounts, appointments vs. "hours," and other elements in work-a-day public relations.

The chapters on the doctor and his community and the doctor and his medical society, which follow, bring into focus the fact that "it is not enough to be a good doctor. The physician has a transcendent obligation to himself, to his profession and to the human race, to be a good neighbor and a good citizen."

It is in his chapters on prepaid medical care and hospitals that Mr. Bryan offers the most ideas to which his readers may take exception. Agree with him or not, however, his opinions on these two subjects will certainly generate productive re-evaluation of one's own views.

As a whole, the book is excellent. It should be required reading for every physician entering practice. To others concerned with medicine's future, it gives a lucid review of the profession's hallowed necessities in the light of the mid-twentieth century.

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WASHINGTON NEWS DIGEST

Washington, D. C.—This session of Congress probably is more than half over. On health legislation, two things are becoming apparent. First, Congress is not attaching much urgency to some of the early-blooming issues that were so prominent in January and February. For example, it has been in no hurry to take up such subjects as reinsurance for health plans, guarantees of mortgage loans for health facilities, expanded care for military dependents or health insurance for government employees. Action may yet come in a rush, and some of these bills may be passed, but not all. The second fact is that Congress this year does seem willing, if not anxious, to take some action on mental health.

One explanation of the slow pace of most health bills may lie in the fact that this is only the first session, and that bills not passed this year may be enacted next year, an election year. At any rate, unless a bill is definitely voted down, it remains alive until the 84th Congress adjourns in 1956.

At the top of the list of favored mental health bills are identical measures by Chairman Priest of the House Interstate and Foreign Commerce Committee and Chairman Hill of the Senate Labor and Public Welfare Committee. These bills, which were not initiated by the Eisenhower administration, provide $1,250,000 in grants for a three-year survey by non-governmental professional groups of all phases of mental health. Presumably the survey would be conducted by Joint Commissioner on Mental Health, formed by the AMA Council on Mental Health and the American Psychiatric Association, with a number of other groups participating.

Considered by these committees at the same time was the administration's proposal for a three-year program of outright grants to states for new and existing mental health programs with Congress deciding on the money needed.

The survey bill was reported favorably by the House Committee within 10 days after hearings were completed. The grants proposal was held up with the explanation that it properly should be considered with legislation not then before the committee.

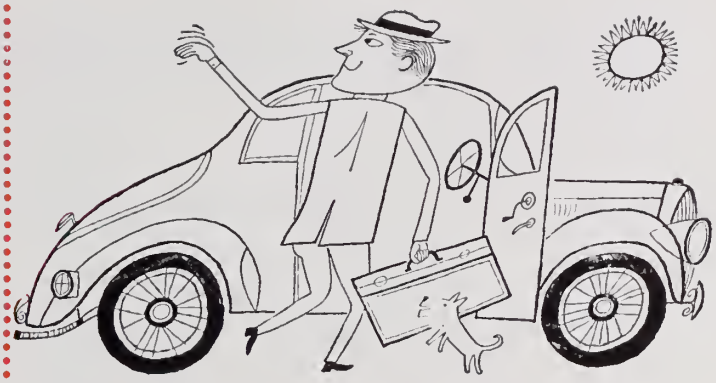
The Priest committee then turned its attention to fields other than health; it also has jurisdiction over legislation on railroads, aviation, communications and federal power. Senator Hill's committee continued on health bills, next taking up his and Senator Bridges' bill for a three-year, $90 million grant program for construction of non-federal laboratory facilities for research in a wide range of chronic diseases.

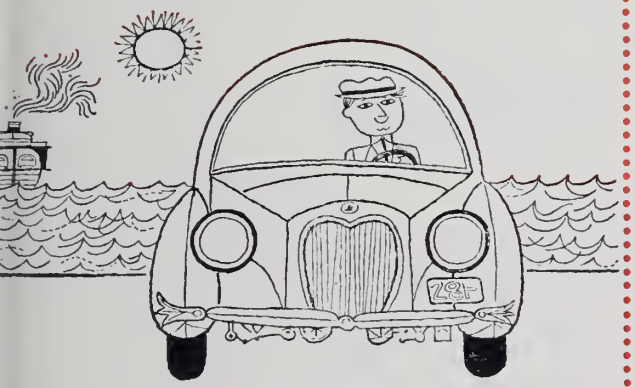
The measure failed to get AMA support, the Board of Trustees deciding it was too broad and loosely written. Dr. George F. Lull, AMA secretary-general manager, pointed out to the committee that the bill gives no voice to the states and local communities in development of a planned and integrated system of laboratory and other research facilities.

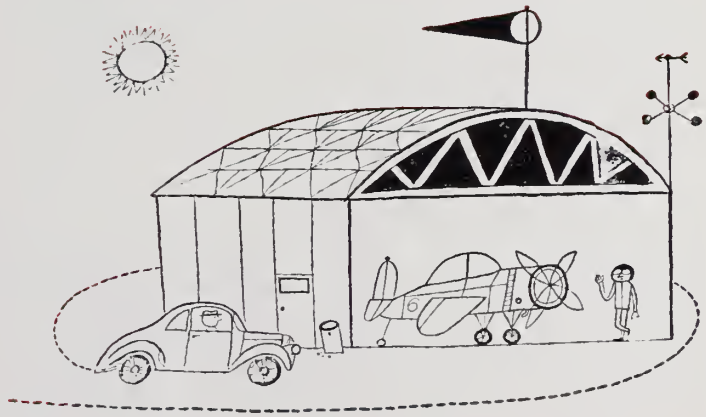
Prior to final Appropriations Committee action on next fiscal year's budget for the Federal Civil Defense Administration, the AMA urged favorable consideration of the agency's request for medical supplies and equipment. Dr. Lull made the point that it was futile for the medical phase of civil defense unless the profession has the supplies to work with. He warned of the medical problems that would arise from an enemy attack, including radio-active fallout. The House proceeded to approve a $30 million appropriation for stockpiling of supplies and equipment, $5.3 million less than the adminstration asked. However, the committee pointed out that FCDA has millions of dollars in unexpended balances.

This same appropriations bill carries approximately $750 million for the Veterans Administration medical budget for the next fiscal year. The measure contained one surprise: an unexpected $16;885,000 increase for a start on remodeling certain VA hospitals. The VA originally asked the Budget Bureau to approve $20 million for this purpose, the Bureau pared it down to $13,815,000 but the House raised it to $30 million.

Another bill that moved through the House with a minimum of controversy was one re-establishing the authority of the Secretary of Health, Education, and Welfare to channel surplus government property to health and educational institutions at no cost.







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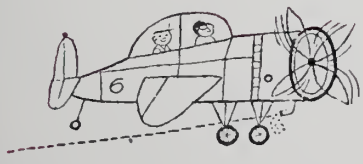

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Committee on Scientific Exhibits

Louisville General Hospital,

Louisville 2, Kentucky

(Applications for space should be received before July 1, 1955)

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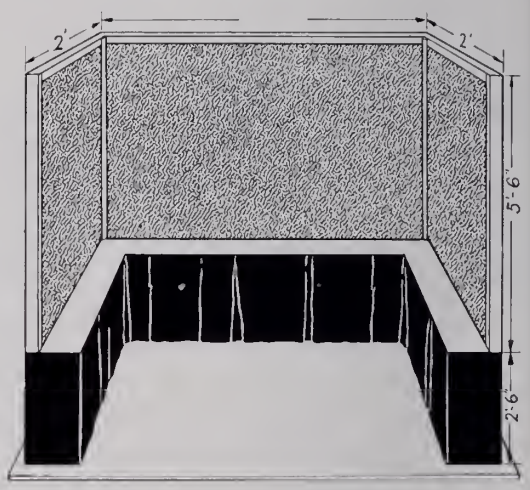

1. Title of Exhibit: .....

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5. Name of institution co-operating in the exhibit (if desired) .....

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Cost of transporting exhibits to the meeting must be borne by the individual exhibitor as well as costs of cards, signs, etc., which are a part of the exhibit.

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The JOURNAL of the

Kentucky State Medical Association

Issued Monthly Under the Direction of the Council

VOL. 53 MAY, 1955 NO. 5

Surgery of Trauma*

JOHN E. HAYNES, M.D.

Madisonville

It has been the custom that an address (oration) in surgery be delivered each year before this association. Many of my distinguished predecessors are known by me. Therefore, being chosen to appear before this great group of people makes me feel somewhat apprehensive, or at least gives me a sincere desire to present a paper worthy of the honor.

It is of interest to note that nearly a century and a half ago Baron Boyer stated that *all* was known in surgery and that any outstanding advancement in the art and science of medicine was impossible. We usually learn new things through work we already know. Surgery of trauma surely affects every clinician in this audience. We know that this subject needs to have life, with a dynamic program. Much is being done. It needs recognition, with an accepted method of treatment. Many of the acutely injured patients are seen in the smaller hospital. They may be treated by many specialists before they completely recover. This subject is confronting us daily from the emergency room of the hospital to the privacy of our offices.

The study of trauma has not received sufficient consideration in many areas. The answer is not immediately forthcoming. However, plans for providing service should be outlined in all hospitals. It seems impossible, as did "Pearl Harbor," that we could have casualties as a result of an atomic attack. Taking all this into consideration, it is logical that the time devoted to the study of trauma is a responsibility all of us must share. An influx of 50 injured persons into any smaller hospital would find us completely unprepared. There would not be enough beds at the hospital. Patients whose health would not actually be endangered would have to be discharged.

A series of cases will not be presented. Our cases are no different from yours. It is not the purpose of this paper to give a detailed outline on diagnosis and treatment. One does not need to know whether the patient is in shock from, for example, a ruptured spleen, a large tear in the mesentery, or other causes. We want to have the ability to determine whether or not the patient should be operated upon or have continued observation. Having the skill to differentiate in a high percentage of cases between the medical and the acute surgical case places one in the highly talented group.

It is not too surprising that all of us have felt at times that we had just as soon not get the severely injured patient who arrives at our hospital, particularly at night, when the lights are low and the house personnel are not too well acquainted with or interested in what we are attempting to do.

The theme of my presentation to you today is in some way to stimulate the Committee at your hospital to seriously take inventory of what you need to make that hospital such that you yourself would feel that you could get adequate treatment there, at least on an emergency basis. We feel, as you do, that the treatment should be such as you would desire for yourself or your family under similar circumstances. Nothing short of this should be our ambition. The subject has too many avenues for one to travel many of them during a single journey. Therefore, I shall briefly confine my remarks to certain phases of the subject, and discuss some of the problems that confront us in caring for the patient.

*Oration in surgery delivered before the Annual Meeting of the Kentucky State Medical Association, Louisville, September 21-23, 1954.

In making a survey of hospital admissions, it has been found that the type patient under consideration is definitely on the increase. It therefore behooves us to extend ourselves to the point of definitely having one or two individuals of the active staff to cooperate with the management of the hospital to see that all is well. Much is being done by the American College of Surgeons. Most of the patients will be covered by personal insurance or by Workmen's Compensation Laws. Staff members who are interested in caring for this type of patient should be the only ones called for in such cases. Many of the staff do not feel that they have the time.

I am certain, however, that fewer men would have a dislike for the duty if all facilities could be kept in readiness at the hospital. Any hospital that accepts the responsibility of caring for the injured patient should have a well-equipped fracture room and an adequately supplied blood bank.

Injury of Abdominal Viscera

Viscera of the abdominal cavity have been classified as follows:

(1) Solid organs, such as the liver, spleen, and kidneys;
(2) Hollow organs—stomach, intestines, gallbladder, and urinary bladder;
(3) Supporting structures—mesenteries of the large and small bowel, the peritoneum, vessels, and nerves.

It is important to realize that any of the above viscera may be the site of injury by a penetrating or non-penetrating wound. Wounds below the level of the sixth rib in the midclavicular line very probably will traverse both the thoracic cavity and the abdominal cavity.[1]

It is also essential to realize that wounds of the anterior chest below the fourth rib may be thoraco-abdominal injuries for the same reason, due to the convexity of the diaphragm.[2]

The non-penetrating wounds are the most important as to diagnosis. These patients need to be quickly classified. A patient who has had adequate anti-shock treatment and does not respond must be suspected of intra-abdominal injury with possible hemorrhage. The patient with a disturbed menstrual period who suddenly develops acute abdominal pain with signs of hemorrhage is promptly operated upon, while, on the other hand, we may have a tendency toward a rather long period of observation for the patient who is thrown from a moving automobile, with all the above signs of hemorrhage, and does not respond satisfactorily to shock treatment.

The properly done diagnostic peritoneal tap has been described as a valuable aid in the diagnosis of acute abdominal injuries in patients in whom the clinical diagnosis of the need for laparotomy is uncertain.[3]

The patient who stabilizes for awhile and then returns to shock level with adequate treatment is usually a candidate for immediate laparotomy. Prompt surgery may be life saving. Of course, the patient with an obvious peritoneal soiling needs a laparotomy.

If one is sure the patient does not require immediate operation, close observation must be done, but wherever there is reasonable doubt, an exploratory procedure should be resorted to.[4]

A continuously fast pulse with a falling blood pressure, despite shock treatment, suggests bleeding and demands operative intervention. Hemorrhage must be controlled by ligating any bleeding points and the shock of hemorrhage treated by the intravenous administration of blood.[5]

Post Traumatic Splenic Hemorrhage

In a large series of cases of post traumatic splenic hemorrhage 74% were of the immediate type. The patient will demonstrate signs of intra-abdominal bleeding with pain, tenderness and shock. The diagnosis of a marked intra-abdominal catastrophe is apparent, and exploration should be done as promptly as possible. In this type of case re-infusion of blood may be a great help. Nothing smaller than a 15 needle should be used to give these patients blood.

It is the delayed type of splenic hemorrhage which may be confusing. This type made up 26% in the series. The bleeding is usually not as severe as in the immediate hemorrhage cases. The bleeding may be delayed for several months. The patient may give a history of not too severe an injury that apparently subsides in a few days, then may later develop left upper quadrant pain followed by spasm, tenderness, and signs of shock and anemia. The pain may be referred to the left shoulder. The correct diagnosis is made preoperatively in perhaps only one-third of the cases. The disease is confused with perforated ulcer, gallbladder disease, pancreatitis, and pneumonia.

The treatment for immediate and delayed splenic hemorrhage is, of course, splenectomy. The wound should always be drained. The tail of the pancreas may

be injured at the time of surgery when it lies in the splenic pedicle. Occasionally an artery that supplies the tail of the pancreas loops into the pedicle of the spleen. Injury to this artery causes necrosis of a small segment of the pancreas. With a drain in place, if a fistula forms, the pancreatic juices are drained and cause no real damage.

The penetrating wound of the abdomen is obvious, and the treatment is exploration. The patient is taking an added risk if exploration is not done when there is the slightest indication that the peritoneal cavity has been entered.

Anesthesia

Anesthesia is so important that this must be mentioned. I heard a surgeon say that he sent his patients to a certain hospital because he could get better anesthesia there. This thought prevails among all, but ofttimes we are not definite in explaining to the family the importance of the anesthetist's responsibility. The completely ideal anesthesia has not been discovered. A satisfactory anesthesia must combine proper oxygenation, complete abdominal relaxation, maintenance of blood pressure, and early return to consciousness following the discontinuation of the agents. One's locality will dictate the type anesthesia given in many instances. Open drop ether is excellent if properly given. The anesthetic agent is safe, but the condition of the patient completely alters the situation. Endotracheal intubation is indicated when there is difficulty in maintaining an adequate airway and there is any possibility of aspirating gastric or intestinal contents. It is well that one member of the team be trained in using the endotracheal tube. One of the greatest causes of poor relaxation is an inadequate airway. Cyclopropane combined with small amounts of ether is highly satisfactory. The period of induction is rapid, with little excitement. Adequate oxygenation is easily maintained because of the strength of the agent. A few surgeons do not like the agent, and there are reasons why it would not be desirable at times.

What type of incision should be made? The incision should be ample. Some of the large ventral herniae have occurred through a McBurney incision which required heavy retraction. The location of the incision will be determined by the site and the course of the object causing the trauma. The right or left rectus is excellent. This incision can be "T'ed" or "L'ed" if necessary.

Griswold and Ortner have advocated re-infusion of blood obtained from a blood-filled cavity.[6]

Lewis and Trumble have warned of the dangers of reactions following re-infusion.[7] We have given up to 1800 cc of blood as a re-infusion, with no untoward reaction. This blood has been removed by using large sponges wrung out into pans containing sufficient citrate, and then filtered into a Kelly bottle for re-infusion. One may wish to use this blood only when other blood in adequate amounts is not available. However, it is worthwhile to save the patient's blood when in any doubt as to the amount of blood available in the bank.

In the event of profuse bleeding, the site is quickly located. Finger pressure will control bleeding from any vessel. With blood being given to the patient through a large calibre needle, his condition will improve as soon as the major bleeding is controlled. Thorough and deliberate exploration can then be done. Explore the posterior wall of the stomach by opening the lesser sac through the gastrocolic omentum. At the same time the pancreas may be explored.

Large perforations of the colon probably in most cases can best be handled through exteriorization. However, the smaller ones may be closed. The question of drainage is controversial. If there is retroperitoneal injury, the space must be drained.

Genitourinary Injuries

Urological consultation should be asked for when at all indicated. In a large number of cases genitourinary injuries accompany other injuries. Frequently these injuries force upon the surgeon a compromise in cases of urinary or genital injury. It should be borne in mind that genitourinary diagnostic procedures are well tolerated by a severely injured patient and compromises should be the exception. Genitourinary injuries are peculiar in that, by-and-large, a precise diagnosis can and must be made prior to surgery. This is a basic urologic principle, and deviation from it may lead to grief.

Severe kidney injuries will produce shock, with local tenderness and perhaps a mass. Check the urine for blood. An intravenous urogram may give the renal outline and an idea about function. One may elect to do a retrograde pyelogram.

Partial or total nephrectomy may be indicated with complete rupture of the kidney with tear into the vascular pedicle. However, conservative treatment will be all that is needed in many injuries to the kidney. If one is conservative in kidney injuries, he will surely remove fewer kidneys, and the end result will be more satisfactory.

Ureteral injuries are almost invariably due to penetrating wounds. The diagnosis and location is confirmed by a retrograde pyeloureterogram. There may be a partial or complete severance. Suture of the wound over polyethylene tube should be done as early as possible. The tube may be brought out through the ureteral wall lower or extended down into the bladder.

Patients with injuries to the urinary bladder should have a cystogram with anterior-posterior and both oblique views. One can use 5% sodium iodide or any of the organic iodine solutions in 5% concentration.

If no extravasation is present, drain the bladder via a large urethral catheter. In the event there is extravasation, do a suprapubic cystotomy, repair the wounds, and drain the bladder via urethral and/or suprapubic catheter. Remove any bone fragments likely to cause trouble. The space of Retzius is drained.

Urethral injuries will cause bleeding from the urethra, and the patient frequently is unable to void. Re-establish continuity of the urethra over a splinting catheter. This may be done by retropubic exposure of the apex of the prostate, the usual site of urethral injury with a fractured pelvis. The laceration may be in the bulbous portion, and if one cannot introduce a catheter, perineal exposure is indicated. Injuries below the urogenital diaphragm need merely splinting over a catheter, and urethrotomy is not indicated if a catheter can be passed without it. However, these patients must be observed carefully because it is not uncommon for the injury to be more extensive than we suspect.

1. Sterile urine in the tissues is quite innocuous, while infected urine is just the opposite.
2. No kidney should be approached surgically until the functional status of the opposite kidney is known.
3. An I.V.P. is useless if the patient is in shock.
4. An I.V.P. may not demonstrate a urinary extravasation.
5. Gerota's fascia will produce tamponade of nearly any hemorrhage from the kidney, except when the blood escapes via the collecting system.
6. Cystoscopy with retrograde pyelograms may be done on any X-ray table.
7. Ureteral injuries are extremely difficult to find if not located prior to surgery by retrograde pyeloureterograms.
8. In case a determined effort is to be made to salvage a kidney, it should be approached anteriorly, either extraperitoneally or transperitoneally.

Injuries of the Extremities

The patient with an injured extremity must be carefully examined, and we must recognize that there may be associated injuries to the head, chest, and abdomen. No prolonged and definitive treatment should be carried out until one knows that the patient is in the best possible condition. However, one can clean the wound and do as much as possible in a given situation.

I wish to mention a patient, eight years of age, who was admitted to the Hopkins County Hospital June 8, 1949, with a severely crushed lower extremity. It was definite that the extremity would need amputation. The child was in severe shock. Antishock treatment was quickly started. The extremity, which obviously could not be saved, was placed on a sterile sheet, washed, covered with sterile towels, and kept cool with ice. The extremity was amputated two days later. At time of amputation the patient's condition was good.

One should have consultation if practicable in all major amputations. Frequently the saving of a limb may be possible and extensive reconstruction done later.

The care of the extremity should start at the place of accident. Most fractures are in the best position at that time. A great deal of harm can be done after the patient reaches the hospital. We like to be present when the patient is placed on the X-ray table. Only by being present can one be sure that the limb is properly handled. Positioning on the table at the time the X-ray is made is important.

Evaluation of the injury to the bone should always be done by X-ray. If there is a fracture clinically, be sure to do repeat X-rays at the proper time in the event there is no X-ray evidence when the first films are made. This is frequently indicated in injuries of the hands and feet. Check for damage to nerves, tendons and major vessels.

Open wounds are a surgical emergency.

It is important to know how recent they are and the extent of possible contamination. It has been said that the tourniquet has little place outside the operating room and the first aid text book. A clean pressure dressing is best. Elevation of the part is valuable in controlling hemorrhage.

Relief of pain is important, and the best way to do this is by proper splinting. All these patients are in some shock, and if a narcotic is needed, give it by vein. One must not give too much narcotic. It usually is not necessary, and is certainly contraindicated in the elderly patient with a fracture. Narcotics reduce elderly patients' will to get well. This is seen in the patient with a hip fracture. A fracture well immobilized, regardless of the method, will not cause pain. On the contrary, the individual with a femur fracture in traction will usually need a narcotic for a few days. Relaxation will be obtained, which will aid in the reduction.

Compound wounds, being surgical emergencies, should be taken to the operating room as soon as possible for mechanical cleansing. The primary purpose is to convert the compound wound into a closed wound. Antibiotic therapy is started. Tetanus prophylaxis is also given. A booster dose of toxoid is given to patients who have received a previous series. It has been our custom to offer the basic immunization series of toxoid to all individuals who receive antitoxin. Antitoxin and toxoid are not administered at the same time. The toxoid is given later, not under three weeks. The time the toxoid is given will depend on whether or not the patient needs additional passive immunity. It has been stated that if antitoxin and toxoid are given simultaneously, the antitoxin will reduce the effectiveness of the toxoid.

It may be necessary to extend the wound, to allow access to the deepest recesses. An effort is made to remove all foreign material. One should excise only tissue which is obviously dead. This is especially true of vessels, nerves, and skin. Generous irrigation with warm saline for 15 to 20 minutes will help to accomplish the task. Soap and water to the skin is our best agent. After we feel that the wound is as clean as possible, we then direct our attention to the bones, nerves, and tendons. Nerves and tendons are repaired primarily only if the wound is recent and clean. If in doubt, a secondary repair is better. It has been pointed out that hypertrophy of the neurilemma will take place in three weeks, making the repair more satisfactory. However, this should not in any way deter one from doing a primary repair when indicated.

It is not unusual for the fracture to be widely exposed in these compound wounds. Internal fixation with medullary nails and screws should be used only if one is sure the wound is clean. The closed or open treatment of a wound will depend on the judgment of the surgeon. One might feel that there is little to lose in taking a chance in closing a "questionable wound" now that antibiotics are available. I feel that much can be lost in way of skin or soft tissue. Wounds left open heal and usually will not be a problem. If the wound is closed and healed, internal fixation may be done a few weeks later. Every effort should be made to prevent a bone infection, which might require years of treatment. Properly used, traction is an excellent method of treatment, and is beyond a doubt safe. However, this method requires close observation.

We must remember that the end result is what counts, and a joint with a satisfactory range of painless motion is considered good even though the X-ray does not show anatomic reduction.

Summary and Conclusion

This discussion has touched upon certain points concerning the importance of a well organized program for the care of trauma.

Trauma to the abdomen, genitourinary system, and extremities has been briefly discussed.

An attempt has been made to emphasize that the subject of trauma is confronting all people daily.

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Be Sure to Register

Important decisions will be made at the August 6th Primary Elections this summer. Every member of the Kentucky State Medical Association, his family and employees are urged to vote. If you are not properly registered, be sure to do so before Monday, June 6th.

Treatment of Hyperthyroidism*

E. PERRY McCULLAGH, M.D.**

Cleveland, Ohio

My discussion is focused on the choice and the application of therapy for hyperthyroidism. Since such choice depends on the results obtained, we will interest ourselves chiefly in that aspect of the problem.

There are three major types of treatment for hyperthyroidism:

1. surgery
2. antithyroid drugs
3. radioactive iodine

All other treatment is supplementary.

Diagnosis

Diagnosis is mentioned for one purpose only and that is to point out the importance of differentiating Graves' disease from nodular goiter, because this may have a special importance in the selection of treatment. It is true that with surgery the hyperthyroidism of Graves' disease and the hyperthyroidism of nodular (adenomatous) goiter can both be promptly and usually completely controlled. If, however, the risk of mortality or morbidity is to be avoided, or if for other reasons surgery is not preferred, one of the other forms of treatment may be chosen. In our experience with the thioureas, the chance of lasting remission has not been nearly as good in nodular goiter as in selected cases of Graves' disease. There is not complete agreement of various workers however on this point. Solomon et al.,[1] for example, believe that the results in the two types are comparable. With radioactive iodine, the hyperthyroidism of Graves' disease almost invariably can be promptly and completely controlled. However with the techniques used up to the present time, many months are usually required to control the overactivity of nodular goiter. This situation may be improved by changes in dosage which will be described shortly.

It is not the place, nor is it necessary to recite the details of the differential diagnosis of Graves' disease and toxic nodular goiter, but I would like to recall a few points. Graves' disease or exophthalmic goiter may arise at any age. If some of the typical signs are present such as lid retraction, proptosis, bulging of the lids, chemosis and edema of the conjunctivae, then the patient can be said to have Graves' disease whether or not hyperthyroidism is present and whether or not a goiter is palpable. If hyperthyroidism is present in the absence of eye signs the problem may be more difficult, especially in a person over 40 or even in a younger person when the goiter feels somewhat nodular. A markedly hyperplastic gland may sometimes have a lobulation which gives a clinical impression of nodules. Under these circumstances very useful signs are those relating to the high degree of vascularity of a hyperplastic goiter: such signs include a readily palpable forceful pulsation of the superior thyroid artery. If there is a palpable thrill over the goiter and if there is a loud bruit over the entire gland, then the patient has Graves' disease. One should be cautious in interpreting the bruit, that it is not mistaken for a venous hum transmitted from the large veins due to pressure of a nodular goiter or the direct pressure of the stethoscope. The hyperthyroidism of Graves' disease is likely to be more acute, its time of onset more definite and it is likely to be much more severe. People under 40 are not likely to be suffering from the hyperthyroidism of nodular goiter. In many older people the onset of the hyperthyroidism has been insidious and the disease suspected only because of signs of decompensation of an arteriosclerotic heart in a person who has had a distinctly nodular goiter for many years.

The differential diagnosis becomes very important in individuals who have cardiac decompensation. Such patients with toxic nodular goiter if given the dose of I^{131} usually needed in Graves' disease would have little chance of prompt recovery. On the other hand if a person with Graves' disease is given a dose as large as we recommend for nodular goiter there would be some chance of precipitating a crisis. Some workers in the field think this purely a theoretic consideration. We believe we have seen it once in a patient with Graves' disease and a very large goiter who received 25 mc. of I^{131} in a single dose.

*Read during the Annual Meeting of the Kentucky State Medical Association, Louisville, September 22, 1954.

**From the Department of Endocrinology, The Cleveland Clinic Foundation, and The Frank E. Bunts Educational Institute, Cleveland, Ohio.

In any event too large a dose in Graves' disease would almost certainly be followed by myxedema.

Each of the three major methods of therapy now available offer such excellent results that x-ray and radium are seldom used. It will be interesting to see whether the use of radioactive cobalt changes this situation.

Preoperative Preparation

Various combinations of treatment can be used for preoperative preparation or to support the patient until the hyperthyroidism has disappeared.

Preoperative preparation is commonly carried out with iodine alone, though some prefer to give antithyroid drugs until the basal metabolic rate approaches normal. The use of iodine as Lugol's solution or in some other form for a week preoperatively has been recommended. Large doses of sedatives are well tolerated and helpful—in active Graves' disease 1½ grains of phenobarbital 3 or 4 times a day can often be given without producing any apparent drowsiness. A high caloric intake, 50% or more above the actual basal caloric requirement, is a very important part of treatment. Whenever possible enough food should be given to maintain weight.

Let us now consider briefly some of the assets and liabilities of each of the three major forms of treatment.

Surgery

Subtotal thyroidectomy, in many places in this country and most places elsewhere, remains the standard treatment. It has the advantage of prompt control in most cases, but even here there is no clear-cut difference between it and other forms of treatment. For example, if a patient with Graves' disease is prepared for surgery over a period of 2 weeks with iodine, or 4-6 weeks with propylthiouracil, then spends a week in hospital and is unable to return to work for another 2 or 3 weeks, it is evident that ten or more weeks will have elapsed.

It is assumed by many surgeons that subtotal thyroidectomy in nodular goiter is advisable because of the potential danger of cancer. Although most observers believe it is wisest to advise removal of a solid discrete adenoma, actually there is no convincing evidence to indicate that cancer can be demonstrated but rarely in multi-nodular goiters removed surgically. In our patients with nodular goiter a careful analysis of 768 cases *including* all those in whom carcinoma was diagnosed or suspected, the incidence was approximately 5%. Crile and Dempsey[2] have estimated however that if we exclude the patients who are suspected of carcinoma on clinical grounds the chance of the presence of malignancy, even in what appears to be solitary nodular goiter, is less than 1 in 6000. Such a chance is less than the surgical mortality rate. In most cases except in papillary carcinoma the cure rate in cases of clinically diagnosed carcinoma of the thyroid is poor. An obvious advantage of surgery is the removal of an unsightly mass in the neck. It should be mentioned also that thyroid surgery is usually well tolerated during pregnancy.

The chief disadvantage of surgery is a definite though small mortality rate, as well as tetany, vocal cord paralysis or hypothyroidism. In Graves' disease there is also a chance of recurrence of the hyperthyroidism ranging somewhere between 5 and 18%. There is in addition in all types of goiter the discomfort of surgery, the necessity for time lost from work and the cost involved.

Antithyroid Drugs

The use of antithyroid drugs is diminishing in popularity as it becomes increasingly evident that the recurrence rate after remission is higher than with other forms of treatment. When remission is lasting this form of treatment has the advantage of leaving the patient with an intact and presumably normal thyroid gland. For this reason I have a definite preference for giving it a thorough trial in young people with Graves' disease before prescribing other forms of treatment. When this is done, an attempt is made to maintain a completely euthyroid state for a year.

Some of the assets of antithyroid drugs are:

1. They will control hyperthyroidism in an easily administered dose.
2. They can be given orally.
3. They are available to all.
4. Their cost is low.
5. Tolerance to the drug or loss of effectiveness does not develop.
6. Remissions are not followed by any lasting complications.
7. An intact thyroid gland remains after therapy.

Against these must be accepted certain disadvantages which include:

1. Toxic effects in some.
2. Higher rate of recurrence than with other methods.

3. Enlargement of the goiter during treatment in some.
4. The patient must be depended upon to take the treatment regularly.

Toxic effects may necessitate stopping the drug in 1 or 2 per cent of the patients; but with proper warning of the patient and cessation of the drug if symptoms appear, agranulocytosis is not to be expected in more than approximately 1 in 5000 patients.

Enlargement of the thyroid may rarely be a barrier to continuation of treatment. If this occurs it is usually transient, and we have come to believe that softening and shrinkage of the gland during therapy presages a successful result.

The antithyroid drugs in common use in this country are:

Propylthiouracil, methylthiouracil, iodothiouracil and mercaptoimidazole. We prefer to continue to use propylthiouracil and see no special advantage in the others. Although the effective dose is small, mercaptoimidazole is probably somewhat more toxic than the others. An effective dose of the remainder is 400 mg. per day in the majority of patients, 600 mg. may be required in a few and rarely a much larger dose is needed. Half the dose needed for control is usually enough for maintenance. It is advisable to give enough to control the hyperthyroidism completely. In some patients slight reduction of the dose leads to mild hyperthyroidism. In such an event we prefer to continue a large dose, and if necessary to give desiccated thyroid concurrently.

Antithyroid drugs may be used safely throughout pregnancy provided hypothyroidism is carefully avoided. Hypothyroidism imposed upon the mother may cause goiter in the baby. For this reason it has been our practice to allow some hypermetabolism throughout pregnancy when antithyroid drugs are used.

In moderate hyperthyroidism of Graves' disease an adequate dose may lead to complete control in a month and in more severe cases twice as long. In nodular goiter it is likely to take much longer.

In our hands results in toxic nodular goiter have not been good so far as lasting remissions are concerned. In Graves' disease the results are poorest in postoperative recurrences and in patients with very large goiters. In other patients with Graves' disease results are very good. In such a group of 60 patients, 90% of which were followed over four years, there were complete remissions in 77%.

In similarly selected patients Rose and Shorey[3] and Greenberg and Bruger[4] have reported remissions in 82 and in 77% of patients respectively.

No lasting complications have been reported following the use of the antithyroid drugs. In mice, cancer of the thyroid has been produced by antithyroid therapy if thyroid tissue of treated animals is transplanted from generation to generation.[5] Carcinoma arising from these drugs has not been reported in man.

Radioactive Iodine

The opinions expressed with regard to radioactive iodine treatment are based almost entirely on clinical experience gained in the treatment of 1400 patients during the last 8 years.

It is considered to be the treatment of choice in most patients with Graves' disease. As stated previously, I prefer to try antithyroid drugs in younger patients who do not have large goiters and to reserve I^{131} therapy for them if the drugs fail. Radioactive iodine treatment seems most clearly indicated in the following situations:

1. Postoperative recurrence at any age.
2. Recurrences after antithyroid drugs.
3. In patients with severe concurrent disease, and
4. In old age or, in
5. Those with very poor cardiac status.

It may be given with impunity to almost any patient if it is the preference of the patient or the physician. Although it is not our rule to use I^{131} as the treatment of choice in those under 35 years of age, it is my conviction that it can be given safely at any age. I^{131} therapy is too slow to be depended upon in thyroid crisis and it cannot be used effectively if its uptake is blocked by iodine which may have been used as treatment of the hyperthyroidism or given for other reasons including urography, cholecystography or as lipiodol. It should never be used in pregnancy, especially after the third month.[6]

Our method of estimation of the proper dose differs little from that in wide use and seems to produce results as good or better than more complicated methods. We attempt, by estimating the size of the gland and the percentage uptake of a tracer dose, to give an amount of I^{131} which will deliver 100 microcuries per gram of gland. A somewhat larger dose is given for the very large gland and for very severe hyperthyroidism, because it

is in these instances that more than one dose is frequently required. In patients with very small goiters a dose below this estimate is used because they develop myxedema most frequently.

By this method we find that approximately 75% of the patients are cured with a single dose, 25% need two doses and 9% need three doses. Among 1400 patients thus treated, I have been able to locate only 9 patients with Graves' disease who received four or more doses. The total amount of I^{131} given in these patients was 26, 18, 19, 66, 37, 37, 44, 75 mc. and 92 mc. respectively.

As far as we know, complete control was obtained in all but three of the entire series. One of these was thought to have mild hyperthyroidism and was given 7 mc. two years after the first dose. One is still toxic after doses of 8, 8, 5, and 5 mc., respectively, in 6 months. The third patient is the only one we admit to be an out-and-out failure. After receiving 92 mc. in a year, this patient still had moderately severe hyperthyroidism. She was the only one in the series who developed thyroid crisis. It occurred after the final dose of 25 mc. and, as soon as possible afterwards, the patient submitted to surgery.

The usual plan we follow is to see all patients two months after the first dose. If no improvement is evident a second dose as large or larger is given. About half the original dose is used if moderate hyperthyroidism remains at that time, and none if the patient is nearing normality.

The results are uniformly excellent. Complete control is obtained in well over 99 per cent. The majority are well in 2 months, most are well in 6 months, and in less than 1% is 6-12 months required for control. No complications except occasional mild thyroiditis and hypothyroidism occur. There may be rare exceptions such as the patient mentioned above, and one patient has been reported to have developed transient tetany. Carcinoma as a result of treatment has not been reported.

Recurrences are rare but not unknown. We have recognized 6 in over 1,000 patients treated. Two of these had developed hypothyroidism and in one the recurrence was over a year after treatment. It is interesting that not infrequently after treatment a peculiar disassociation of the criteria of hyperthyroidism occurs. Some patients have I^{131} uptakes below 20%, basal metabolic rates from zero to -20% and low P. B.I. levels, yet appear to be quite normal clinically. Others, especially those with nodular goiter, may have remaining hyperthyroidism, high basal metabolic rates, normal or sometimes markedly elevated P.B.I. levels and yet have very low I^{131} uptakes. This may be due to a continued outflow of preformed hormone stored in a large gland and escaping although no new hormone is being made.

The treatment of nodular goiter has not been so dramatically successful. Control has taken too long: a particular disadvantage when elimination of hyperthyroidism in a patient with heart failure is needed at once. It should not be overlooked however that proper preparation for surgery under such circumstances may be slow, too, and the risk of operation decidedly above the average. Though the results have not been as good as in Graves' disease, nevertheless over 95% of our patients are eventually free of hyperthyroidism on one to three doses of I^{131}. The average "cure dose" in our patients has been approximately 35 mc., as compared to about 10 mc. in Graves disease. Among approximately 150 patients with toxic nodular goiter I have seen 4 patients who have needed four or more doses and required 8 to 21 months for control. The total doses given to these patients were 100, 38, 148 and 170 mc. In one patient a total of 80 mc. was given and mild hyperthyroidism still existed after 48 months.

We have recently examined the records of patients with toxic multi-nodular goiter who have received an initial dose of I^{131} of 20 mc. or more.[7] These were divided into two groups—those who were given a first dose of 20 to 30 mc. and those who received 50 mc. in a single dose. I can tell now the outcome in only 29: 19 of these had a single initial dose of 20 to 30 mc. and 10 had a single dose of 50 mc. The results were distinctly better in those receiving the larger dose, and no thyroiditis, cardiac or other complications were seen.

Of the 10 receiving the largest doses, 8 were completely controlled within four months. Of these 8, 2 were euthyroid in 2 months, 2 in 3 months, and 4 required 4 months.

Of the other two, one was euthyroid in 10 months and the other was improved in 6 months and not seen since.

One objection to the use of radioactive iodine in nodular goiter which is frequently raised is that it does not remove nodules. It should not be overlooked, however, that the nodules, though they may remain, may be so greatly reduced in size as to be quite inconspicuous and pressure symptoms are

relieved as shown in the accompanying photograph.

Showed marked reduction in size of goiter following a total of 100 mc. I^{131} over 20 months. Surgery had been attempted unsuccessfully, and hyperthyroidism recurred following propylthiouracil.

We hope that in patients with nodular goiter and hyperthyroidism, larger doses may be capable in most cases of controlling hyperthyroidism as rapidly as surgery.

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The Problem of Post-Lumbar Puncture Headache *

ROBERT W. LYKINS, M.D.

Louisville

The problem of post-lumbar puncture headache has been increasingly difficult to solve since the introduction of early ambulation in the postoperative and postpartum patient.

History

A brief historical sketch reveals the earliest reported headache following subarachnoid puncture occurred during the period from 1891 to 1898—Quincke first demonstrated the technique of subarachnoid puncture in 1891 and Corning was the first to introduce an anesthetic agent into the subarachnoid space in 1894. Five years later Matas first employed this technique for operative purposes in the United States. As early as 1918 MacRobert[1] offered an explanation for the mechanism of production of headache following subarachnoid puncture. Greene[2] in 1923 observed a persistence in the dural laceration and advised using a smaller gauge needle. Since that time many papers have appeared in the literature offering explanations for the cause and advice for treatment, but in 1954 the problem remains unsolved for the safe, successful abolition of post-lumbar puncture headache. What are the causes? What is the symptomatology? What has been done in the past? How frequent is this complaint? What can be done?

Physiological Considerations

Since 1923 different investigations have attempted to find a workable treatment for these patients. Let me first discuss the physiological consideration associated with this disorder. We first must understand how the sensation of pain is elicited from the contents of the cranium. Wolff[3] has demonstrated the sites of painful areas located along the paths, and in association with the great veins, sinuses and arteries of the brain. The coverings and substance of the brain are for all intent and purpose, devoid of sensation. Some stimulation must occur in the form of pressure. The Monro-Kellie doctrine[4] was presented for better understanding of the dynamics of the intracranial contents. According to this work, the brain is enclosed by rigid

*Read during the Annual Meeting of the Kentucky State Medical Association, Louisville, September 21, 1954.

boundaries and the two fluid aspects are in constant equilibrium. The loss of one fluid or reduction of its pressure results in a compensatory increase in the other. Thus an equilibrium exists in the supine position. In the head down position the pressure of the cerebrospinal fluid at the vertex becomes positive and therefore increases the peripheral resistance to cerebral blood flow and as a result keeps the brain from being "overloaded" with blood,[5, 6] whereas in the erect position the pressure of cerebrospinal fluid at the vertex is markedly negative, offering minimal peripheral circulatory resistance and resulting in a normal cerebral blood flow. Keep in mind the foregoing remarks and remember these events occur in the normal individual. How is this sequence of events altered following a subarachnoid puncture? The patient arises one morning and has headache. If a manometric reading was done at this time it would be found to be O cm H_2O in the lateral recumbent position. If exploration of the region around the dural puncture was made it would be found to have cerebrospinal fluid coming from a hole in the dura. What happens when the patient assumes the erect position? With the loss of cerebrospinal fluid in the lumbar area the negativity in the vertex is made more negative and less and less or even an absence of peripheral resistance to cerebral blood flow exists. Thus more blood flows into the brain seeking to establish equilibrium and as a result increases the total mass and weight, causing a downward displacement of the brain. The anchoring structures, the large veins, sinuses and arteries, which are fixed, are subjected to stretching and pressure and hence pain is the response. Opposite events occur in the recumbent or head down position.

Wolff[3] has predictably produced headache in human volunteers by drainage of cerebrospinal fluid while the subject is on a tilt table and has relieved symptoms by replacing the exact volume of cerebrospinal fluid.

Symptomatology

The typical history obtained from the patient is as follows: Operation or delivery was performed two days ago. Yesterday, the patient was out of bed several times and felt well except for incisional discomfort. Today, after arising, a headache started which seemed frontal in origin and may or may not have become occipital. Perhaps there was only tightness in the neck and over the tops of the shoulders. This discomfort persisted and the nurse administered aspirin which did not relieve the headache or discomfort. Perhaps by this time some dizziness and nausea, or blurred vision, was noticed and the patient returned to bed. After assuming the supine position the headache seemed to go away. The patient decided to stay in bed. Noon came with the nurse bringing in the lunch tray and elevated the head of the bed and the patient began to eat, only to notice the headache returned, and called for the nurse to let her down, which relieved the discomfort. During the following four days different drugs were administered without good results and on the 4th or 5th day after the onset of headache it subsided. This is the typical sequence of events which occurs and is called "spinal headache," "postural headache," or "lumbar puncture headache."

This occurs in from 10-19% of all operative and obstetrical cases and varies with each author according to the qualifications for the classification of headache in their series reported.

Past Treatment

During the past forty years many types of treatment [7, 8, 9, 10, 11, 12] have been advocated for headache following subarachnoid puncture, but none seem to have sufficient safety and effectiveness to be worthwhile. Probably the earliest treatment was bed rest which proved highly effective, but with advances in surgery and obstetrics, it became necessary to ambulate patients very soon after the operation or delivery to avoid circulatory complications, and thus the incidence of headache increased.

Numerous drugs were tried without much attempt being made to predict what changes it was hoped would be accomplished in the altered physiological pattern. Nicotinic acid, caffeine and sodium benzoate have been used intravenously without striking results. Intramuscular pituitrin enjoyed brief popularity as did the ergot alkaloids.

Physiological Approach to Treatment

The physiologic approach is the best method to attack this exasperating problem and revolves around five fundamentals: (1) Some method to keep the fluid from leaking out; (2) Replacement of lost cerebrospinal fluid; (3) Reduction in the calibre of the hole; (4) Parenteral replacement of fluid lost as cerebrospinal fluid;

and (5) Most important of all—prophylaxis against such an occurrence.

One of the first methods tried for keeping the fluid from leaving the subarachnoid space was the insertion of a catgut plug[13] before withdrawal of the needle. This proved very effective, but reaction to the catgut was considered too hazardous. Another approach was made in 1917 by Danis[14] which consisted of the epidural injection of saline in an effort to keep fluid from leaking out of the hole in the dura. He stated the results were very beneficial. Rice and Dabb[15] as recently as 1950 revived this method and stated relief from headache was obtained in all patients. Kaplan and Arrowood[16] also used this technique.

Replacement of fluid in the subarachnoid space along with initial manometric pressure recordings was performed as early as 1923.[17] Two patients were observed to have extremely low cerebrospinal fluid pressure during a time when headache was severe. Normal saline was injected into the subarachnoid space and relief obtained. Other investigators[18, 19, 20, 21, 22] substantiated the original results with their own small series of cases. I wanted to re-investigate this and the epidural route and therefore set out to determine the usefulness, safety and advisability of injection of fluid into the epidural and subarachnoid space for the relief of headache.

The selection of patients was limited to those who had severe postural headache and were unable to carry out daily ambulation, bathroom privileges, or eating meals. The patients were seen immediately or as soon as possible and interviewed about previous episodes of headache, location, severity, onset and other associated symptoms.

Method

The method of treatment and anticipated results were explained to the patient. All patients were asked to note any untoward symptoms during the injection, when they experienced relief and whether or not it was complete. The manometric studies were carried out before and after the injection. Excepting two instances, the lateral recumbent position was used. No manometric readings were made in the epidural group. The follow-up was made daily or every other day until discharge and the patient was asked how he felt as compared to before treatment; how long he had relief; when the symptoms returned; was the severity the same, lessened or increased. The site of treatment was the lumbar region throughout the entire series. The patients were informed they could ambulate or remain in bed. The majority obtained so much immediate relief they felt they did not wish to remain in bed.

Results

The results fall into three categories: (1) Those who obtained complete relief during their hospital stay; (2) Those who obtained only partial relief; (3) Those who obtained no relief. Thirty-seven patients were treated by the subarachnoid injection method—29 of these were given sterile normal saline—the remainder received sterile 5% dextrose in water.

The ages varied from 18 to 58. The mean age was 33. All except nine patients were males. The operations were variable but the majority (70%) were in the lower abdomen and perineum. The size of the spinal needle was 20 gauge. The onset of symptoms occurred the third to fifth day. The number of days elapsing from the onset of headaches to institution of treatment varied from one to five days, but 71% were treated in the one to two day period. The headache location was largely frontal and very frequently associated with nuchal soreness, stiffness or tightness. Blurred vision was encountered in 30% of the group.

From the total group seven patients (18.9%) obtained complete relief; fourteen patients (37.8%) obtained partial relief; and sixteen patients (43.3%) obtained no relief. Ninety-five percent of patients of the two groups experiencing some degree of relief stated this was immediate and five percent stated it required up to twenty-four hours for any noticeable relief. The duration of this period varied from one hour to 10 days, the largest group falling into the less than 24 hour category.

The initial pressure in the 37 cases that were measured was found to be zero in 32 patients; the remaining five had pressures of 100, 96, 92 and 60 mms. of water. The fifth had 100 mms. in the sitting position. The highest pressures were recorded in patients seen when more than two days had elapsed from onset of symptoms to treatment. The volume of solution injected ranged from 10 to 100 ccs.—the average was 39 ccs. The final pressures recorded were from 130 to 270 mms. H_2O. The mean pressure of 134 mms. of H_2O was estab-

lished. The patient whose final reading was 270 mms. H_2O was in the sitting position at the time.

Complications

Complications and untoward results to injection were recorded. The majority of patients complained of pressure symptoms in the dermatomes supplied by the lower lumbar and upper sacral nerves. These were transient and caused no real concern. The most marked complications were recorded in five patients. Two patients developed turbid fluid, signs and symptoms of subarachnoid irritation, diplopia and pain in the arms and upper thoracic area. These symptoms very slowly subsided. One patient developed marked and persistent pain in the shoulders which was present five days after the headache had subsided. Another patient exhibited a generalized clonic convulsion of three minutes duration four hours following the injection. No history of convulsive seizures in the past history was found. Another patient developed girdle pain in the lumbar area, radiating down both legs to the knees, stiff neck, and, generalized twitching. This lasted for three days. Two other patients developed signs of cranial nerve palsies of the sixth and eighth nerves.

The 20 patients treated by the single epidural injection of normal saline conformed closely as to age, type of operation, onset of symptoms, number of days elapsing from onset of symptoms to treatment, location of headache, associated symptoms and onset of relief. The volume of solution injected in this group was from 10-70 cc. The average was 28 cc.

The degree of relief afforded these patients also fell into the same three categories as did those of the subarachnoid series. Fifteen per cent obtained complete relief; 30% partial relief; and 55% no relief. The duration of relief was much shorter as compared to those who were treated by the subarachnoid method. The majority of patients had less than 10 hours relief.

Complications and untoward results fall into the same general pattern as for those of the former group but with less frequency. Only four patients experienced symptoms of pressure. One hour following treatment one patient developed hyperactive deep tendon reflexes which lasted for 36 hours, and another patient experienced right-sided facial analgesia associated with diminished hearing on the same side. These symptoms lasted for five days.

In view of the foregoing facts, one asks, "Is this a safe and suitable method of treatment for this type of headache?" The frequency of untoward response or complications, nine out of fifty-seven patients would indicate a poor form of therapy.

There seems to be no doubt as to the effectiveness of both these routes for the immediate relief of discomfort, but the small percentage, 13%, of the total 57 obtaining lasting beneficial results bears out the impression that other methods have greater merit. A larger series may disclose a patient who might have a more serious complication than was encountered in this study.

I would offer a word of caution in employing these methods for the treatment of headache following lumbar puncture.

Recent Trends

Bed rest still remains the least dangerous method of therapy for post spinal headache.

Some have been advocating the use of a smaller gauge needle. Greene[23] has reported a dramatic reduction in the overall incidence of headache following the use of a 24 and 26 gauge needle. This certainly would seem to follow the line of reasoning "larger hole — larger number of headaches."[24] To this extremely fine needle others have added the method of increasing the daily fluid intake following lumbar puncture. They report an even greater reduction of the number and severity of headaches. This also follows logical reasoning along physiological lines. The fluid that is lost to the tissues must be replaced faster than it is absorbed.

Probably the best approach to the problem is prophylaxis. This can embrace a combination of methods of relief. We know that assuming the supine position will relieve headache in this instance and if a smaller hole is left and adequate hydration is maintained a smaller number of headaches will occur. We further realize the hole left in the dura with the ordinary needle causes a lacerated type of flap[2] and patients kept in bed 10 to 14 days postoperatively develop grave complications. Out of this jumbled assortment of facts we can assemble a regimen of prophylaxis.

Other Methods of Treatment

During 1949-50[25] I participated in a study to determine the prophylactic effect of bed rest for the first three to five post-

operative days, as opposed to early ambulation. The series included 227 consecutive unselected patients with comparable operative intervention. As one might expect, the incidence of headache in the three to five day bed rest group was 3.7% and the incidence in early ambulation was 13%. The striking feature of the study revealed no increase in postoperative morbidity or complications in those patients who remained in bed the first three to five days. This would indicate the surgeons have "robbed Peter to pay Paul" by early ambulation and have given the anesthesiologists a headache.

Greene[23] reported the incidence of headache in his institution was reduced approximately 95% with the use of a 26 gauge needle and the addition of an assured normal daily fluid intake. This is very dramatic but has one fault. This is the technically difficult task of inserting a needle so flexible and fine as a 24 or 26 gauge. The incidence of failure of adequate spinal anesthesia increases with the use of this method. This, then, is not the answer we seek to our problem.

How may we alter the shape of the dural opening? The ordinary needle lacerates a flap type of opening. Others[26, 27, 28, 29] have advocated the use of a needle whose tip is fashioned in the form of a sharpened pencil with the aperture on the side rather than on the end. This was devised in an effort to go between dural fibers instead of cutting a few and causing a weakness leading to a laceration.

During the period from February 15, 1954, to this writing, one obstetrical service in this city in one hospital has been using the combination of the pencil point needle with immediate intravenous fluid. To date there has been a 50% reduction of headache compared to the same period last year.

I previously mentioned investigation of bed rest in a group of patients for prophylaxis of headache. The reduction in this group was 9.3%, a very significant figure, and during this series no complications attributable to bed rest occurred.

Perhaps the best method of treating post-lumbar puncture headache is a combination of prophylactic measures, using a pencil point needle with intravenous fluid immediately after lumbar puncture, combined with a period of semi-bed rest for 72-100 hours.

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Obstetric Misconceptions *

JOHN PARKS, M.D.**

Washington, D. C.

In the scientific and social history of the human race many fundamentals of reproduction are of relatively recent discovery. Less than 300 years ago the Dutch anatomist, Reijnier de Graaf (1641-1673) demonstrated the ovum and suggested that it served as the human egg. Only a few years later a fellow countryman and pioneer microscopist, Antonj van Leeuwenhoek (1632-1723) following the lead of one of his students, first described the semen of male animals as being filled with animalculae.[1] These two profound discoveries gave rise to an abundance of scientific theory. The "ovists" thought the egg the true beginning of man. The "spermists" with their uniocular vision and sense of masculine superiority even saw a perfectly formed fetus curled up in the head of the sperm.[2] More than a century passed before it was realized that human creation results from the union of sperm with ovum.

Even today there are many who share a feeling of male superiority about reproduction. From the point of view of embryologic development certainly this is no more than half true. The female of the species goes through the same early gonadal development of the male; then discards the mesonephric or Wolffian ducts as unsatisfactory for her purposes of reproduction, and finally develops a new Mullerian system of her own in close proximity to the ovaries.[3,4] The ovum itself is a highly specialized cell many times larger and produced in infinitely smaller numbers than its male counterpart the spermatozoan.

Generally speaking in plant and animal life, the lower the species the greater the ratio of ova to spermatozoa.

It is interesting, too, that the ovum (0.135 mu) is the only individual human cell which can be seen without the aid of magnification.[4]

Obstetrics as a science of human reproduction is very young and many truths are still to be learned. However, the art of midwifery is very old. My discussion today will be directed toward a few current misconceptions about pregnancy, many of which originated among the mysteries of midwifery or from pseudoscientific theories of the past.

Preconception

To the consuming public sex is seldom presented as the end product of pure love and perfect mating. In advertising, radio, television, and motion pictures sex follows a feminine pattern of legs, breasts, and few facts. City children are handicapped to a greater degree than their country cousins. Through 4H and similar organizations farm boys and girls learn to appreciate the value of eugenically sound animal offspring. In urban schools more time is spent on mathematical laws and a new language than on the biology of mankind. Courses in hygiene are usually given too late in the student's curriculum to be of real educational value. Sex misinformation and early emotional repressions have a profound and unfavorable influence on marriage, mating, and parenthood.

Holdovers from our medical past include many misconceptions. Prominent among these in the minds of men and women are: that masturbation produces sterility and insanity; that contraceptives cause cancer and infertility, and that the time of greatest fertility immediately follows a menstrual period.

Today, we know that masturbation influences fertility only in so far as it interferes with normal relationships. There is no specific form of insanity which can be attributed to masturbation. Mental disturbance found in association with the procedure always has more important underlying components.

Contraceptives cause neither infertility nor cancer. It is true that many infertile couples unwittingly and unnecessarily resort to contraceptive methods for many years before finding out about their inability to reproduce.

Some patients feel that the physician is able to prescribe a pill or potion which when taken by mouth will prevent pregnancy. To date such therapy is not practical, or at least not healthy. Many women believe that no contraceptive can be successful and with such individuals it usually is not.

No proof has ever been presented that modern mechanical or chemical contra-

*Read during the Annual Meeting of the Kentucky State Medical Association, Louisville, September 21, 1954.

**From the Depatment of Obstetrics and Gynecology, The George Washington University, Washington, D. C.

ceptives cause cancer.

Older theories of conception in relation to menstruation, based for the most part on case studies, have been disproved. Ovulation and the peak of feminine fertility are now believed to occur about fourteen days prior to the onset of a normal menstrual period. However, the vagaries of menstruation are many and timing is often poor. It is the exceptional woman who keeps a perfect accounting of her menstrual cycles. On the other hand the delayed onset or missing of an anticipated period are frequently considered *prima facie* evidence of pregnancy by the patient. It has been estimated that possibly as many as 40% of women who seek the services of an abortionist are not even pregnant.[5]

During Pregnancy

Once pregnancy is established, the patient and her physician are confronted with a new set of misconceptions.

There is a general belief that having a baby will cure dysmenorrhea, correct uterine malposition, and free one forever of inhibitions which produce frigidity. These benefits are true only insofar as pregnancy tends to correct a pathologic condition such as endometriosis or to establish parenthood as a desirable feature in family maturity.

Bleeding in early pregnancy does not necessarily mean inevitable abortion or a possible defect in the embryo. Scant bleeding is a common accompaniment of implantation and early placental formation. The fear which bleeding often provokes in the patient may in itself be a possible factor in additional blood loss from early threatened abortion.

Expectant mothers often receive disturbing information about the influence of alcohol and tobacco on the developing fetus. Drinking liquor and smoking are often accompanied by feelings of guilt and certainly either of these habits can be carried to an unhealthy excess. From a caloric point of view a highball is practically equivalent to a candy bar. Unless drinking interferes with nutrition or leads to a directly traumatic episode it has no effect on fetal development. The child will be more influenced by the family use of alcohol after than before its birth.

Smoking in moderation will never be noticed by the unborn baby.

During the first quarter of this century chronic lead poisoning was found to be one factor in abortion and premature labor. Experimental studies on animals were carried out to prove that lead poisoning inhibited proper placental development.[6] It is also known that turpentine taken internally injures the kidneys. These two facts have caused many women to avoid paint during pregnancy. However, today's paint contains very little white lead or turpentine. Absorption of lead can only occur by direct and constant contact. The amount of turpentine absorbed from the skin or air is negligible. The expectant mother will do her developing embryo no harm by occasionally covering the walls or furniture with new color and there is no real reason to believe that being in freshly painted surroundings has any more than a slightly nauseating effect on the pregnant patient, just as it has on many other people.

Fetal markings as a result of a frightening prenatal experience are figments of fertile imagination and the vast laws of chance association.

Stretching has little if any influence on the fetus. Certainly hanging curtains, using rope, or holding onto a subway strap will not throw loops or tie knots in the umbilical cord.

Some misinformed men and women believe that relationship during pregnancy will influence the future social development of the unborn individual. The baby is above and apart from the vagina. Only indirect influences on fetal health can occur as a result of relationship in the latter weeks of pregnancy. These include: possible initiation of premature labor; the introduction of infection, and rarely the partial separation of a poorly implanted placenta.

An old saying goes "for every baby—a tooth". Pregnancy does influence metabolism and it will facilitate decay of already infected teeth, but not for lack of calcium. No fetus ever absorbed calcium from his mother's teeth. There are many more available sources of maternal calcium than the fixed mineral substances of the teeth.

Another prenatal fallacy is the feeling that the mother must eat enough for two.[7] There is abundant evidence to support the benefits to expectant mother and fetus of balanced protein, mineral, and carbohydrate intake. Muscle and bone building proteins and minerals are needed but caloric requirements are certainly not doubled by pregnancy.[8]

Age is a source of comment and concern in pregnancy, particularly for the person

past 35 or 40. It is true that the time of greatest obstetric safety occurs in women from 20 to 24 years of age. However, the margin of danger in pregnancy at any age is no longer very great. Expectant mothers past 40 are a bit post-mature but in the United States even these women have a better than 200 - 1 chance of surviving childbirth.[9] Normal pregnancy at any age improves rather than impairs health. Death results from pathologic conditions or physiologic accidents, circumstances which seldom need accompany pregnancy.

Many mystic signs and pseudoscientific methods of determining the sex of the infant before birth have been devised. For example two statistical relics which failed to stand the test of time were: the "Law of Hofacker and Sadler" which proposed the greater the age of the husband over that of the wife, the greater the likelihood of male offspring. The "Law of Starkweather" stated that the "superior" parent (meaning of course intellectual and physical features) tends to reproduce its own sex.[10] Scientific studies of prepartum bone ossification determinations and endocrine differences have failed to provide accurate predictions. To date there is no way to tell the sex of an infant until it is seen at birth.

In the latter weeks of pregnancy patients sometimes speak of taking a ride down a bumpy road to initiate labor. The origin of this thumping therapeutic suggestion possibly goes back to primitive people when minor acts of violence were directed at the contours of women in the hope that delivery would occur before the tribe had to move on rather than while en route.[11] Somewhat milder forms of therapeutic induction of labor are still in vogue.

Speaking of travel suggests the common thought that a trip will result in abortion or premature labor. With modern means of transportation normal pregnancy will not be interrupted by anything short of a very traumatizing accident.[12, 13]

Another common belief is that labor will be initiated by a change in the moon. When so many features of feminine physiology and reproduction are measured by the cycles of the moon it is only logical that lunar changes might be called upon to terminate pregnancy. There is no reason to believe that the moon has any specific effect on the intrinsic factors of uterine muscle activity.

During Labor and Delivery

There is a general belief among patients and physicians that most babies are born at night. This is not true. Labor frequently begins or ends during the night, but actual birth occurs equally if not a bit more frequently during the day than at night.

An unvoiced but frequent patient question is how can a baby pass through such a small opening without traumatic distortion of structures. That such can occur is one of the truly phenomenal features of feminine reproductive capacity.

In a culture where discomfort is recognized and where past practice has developed fright provoking terminology such as dry labor, rupture of the bag of waters, forceps, tears, floating head, and labor pains it is only reasonable that first babies are frequently born by "sheer force and fear". In reality, modern analgesia and anesthesia, proper prepartum conditioning and careful attention to the details of parturition can make childbirth comfortable and safe.[14]

During the Puerperium

Many misconceptions about the puerperal period prevail. Older practices of enforced postpartal bed rest of two to three weeks have proved unnecessarily confining. Patients who are up and about after delivery have less trouble with bowel and bladder function; uterine involution is more rapid, and the likelihood of pelvic thrombosis is possibly less. Old fears of uterine prolapse are unfounded. Bearing down before cervical dilatation and trauma at delivery, not early ambulation, contribute to uterine prolapse. Certainly an empty uterus is not as likely to prolapse as one filled with fetus and fluids.

Postpartum bathing is as safe and comforting in the puerperium as it is during menstruation. A shower is the cleanest kind of bath. A day or so after delivery the normal mother may enjoy a shampoo and shower without fear of complications.

Rest is at all times a relative feature in life. High, uncomfortable, narrow beds, unknown roommates, ringing telephones, disturbing doctors, nurses and visitors usually make hospitals unsatisfactory places for rest. However, hospitals can be planned for maternity patients and their new babies and procedures can be changed to permit mothers to enjoy their infants, without fatigue.

Few features of obstetric and pediatric care contain more conflicting theories than those surrounding breast feeding. Beliefs that breast feeding causes large breasts, a flabby waistline, a large appetite, and many personal inconveniences are not true. The normal mother while breast-feeding her infant undergoes involuntary exercise of all autonomically related smooth muscle structures. These contractions aid in involution not only of the breasts, but of the uterus, intestines, and bladder muscles as well. The benefits of breast milk for the infant are well known. However, it is true that modern pasteurization, condensed milk and refrigeration make formula feeding also a safe procedure for the newborn. Nursing has little if any influence on ovulation. Certainly as a preventceptive method breast feeding frequently fails.

A final fear for the mother returning home centers about her ability to go up and down stairs. In the past, medical restrictions have led some courageous and kind husbands to carry their wives not only over the threshold but on upstairs. This is hazardous. A fall may bring both parents back to the emergency room. Any patient who can remove herself from a modern hospital bed, can navigate a stairway without injury to internal structures. All she does in mounting a stair is lift her body weight about ten feet in divided efforts. This requires some energy. If repeated many times during the day stair-climbing will become tiring, but hardly more so than other exercises which are so frequently prescribed for postpartum body reconditioning.

One of the most fascinating phases of medical education consists of examining the theories and beliefs of the past in the light of present day knowledge. Although facts of today may become fallacies of tomorrow, many current obstetric misconceptions can be discarded with safety and benefit for all concerned.

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Bone Marrow Aspiration and Biopsy *

EVERETT H. SANNEMAN, M.D.

Louisville

Biopsy of the bone marrow to aid in diagnosing diseases of the hemopoietic system is another procedure which the clinician has to offer his patients. The first marrow biopsy of the femur was performed in 1903, and of the tibia in 1908. Thus this procedure is over fifty years old. It was not until the 1920's though that much emphasis was placed on it. Since then the procedure has become a more or less routine study in modern medicine.

Equipment

Most of the equipment needed for a marrow aspiration can be found in any doctor's office. Included are a five cc. syringe, a twenty cc. syringe, a small needle for injecting Novocaine, sterile two-by-two gauze flats, Merthiolate, Novocaine, Band-aide, sterile gloves, and a bone-marrow needle. A shortened spinal needle may be used for a bone-marrow needle.

Occasionally one can not aspirate marrow through a regular bone-marrow needle. In this situation a bone marrow biopsy is indicated. This requires a larger biopsy needle with a serrated cutting edge.

Site

In performing a bone-marrow aspiration, several sites are available. These

*Read during the Annual Meeting of the Kentucky State Medical Association, Louisville, September 21, 1954.

include the sternum, the ilium, the spinous process of the vertebra, and, in children under two and one-half years of age, the tibia. For a marrow biopsy using a biopsy needle, the ilium is the preferred site.

Procedure for Aspiration

The procedure is the same for any site. The area is first cleansed with alcohol and then Merthiolate. Then two to four cc. of Novocaine are introduced, first under the skin and then down to the periosteum. The bone-marrow needle is then pushed with a slight rotary motion through the skin and subcutaneous tissues to the surface of the bone, through the cortex and into the marrow cavity. There is a characteristic decrease in resistance or "give" which one feels when the needle enters the cavity. The stylet is then removed and the twenty cc. syringe attached to the needle. Less than one-half cc. of material is aspirated. If a larger quantity is removed there is too much admixture of marrow particles and peripheral blood. The aspirate is then placed on a slide or in a Petri dish. The bone-marrow needle is removed and a Band-aide placed over the puncture site.

The aspirated material is then examined grossly for marrow particles and for gross evidence of increased fat content. Using a white-cell pipette, individual particles are picked up, placed on clean slides, and streaked out in a thin film. Care should be taken not to include too much peripheral blood with the marrow particles. The slides are stained with any conventional stain such as Wright's or Giemsa.

Procedure for Biopsy

To obtain a biopsy of the marrow one uses the anterior superior iliac crest. The skin is prepared and Novocaine injected the same as in the aspiration technique. Then, using the larger, shorter needle, one penetrates the skin and subcutaneous tissues until one reaches the periosteum. The smaller needle with the serrated cutting edge is then inserted into the lumen of the larger needle. With a firm rotary motion it is guided into the marrow cavity until its hub strikes the butt of the larger needle. After a few complete twists the inner needle is withdrawn with the specimen in its lumen. Using the long stylet, the specimen is forced out into a test-tube of formaldehyde. One now has a specimen of marrow about one-half inch long which is sent to the pathology lab the same as any other surgical specimen. It must be decalcified before it can be sectioned and stained. The site of the biopsy is covered with a Band-aide.

Both these procedures take only a few minutes and can be done either at the bedside or in the doctor's office. It is not necessary to use the operating room, thereby saving the patient that added expense.

Indications

One may ask, "When should a bone-marrow aspiration be performed?" The answer can be found in one single phrase; namely, whenever one suspects any disease affecting the hemopoietic system and when the diagnostic information cannot be obtained from other sources. A biopsy is indicated whenever one cannot secure a satisfactory specimen by aspiration.

Results

The results have been divided into three main categories. The first category includes findings of crucial diagnostic significance. Here the bone marrow aspiration yields a positive diagnosis, either unsuspected or not accurately diagnosable by other means. Examples of this would be Gaucher's disease and metastatic carcinoma involving the marrow. The second category includes findings of confirmatory significance when the clinical diagnosis is fairly well established. Examples would be lupus erythematosus and idiopathic thrombocytopenic purpura. The third category includes instances in which the procedure is of value for exclusion of a blood dyscrasia.

Dangers

In closing one must point out for the sake of completeness and caution that there are a few potential dangers associated with this technique. These are hemorrhage, infection, and penetration of the mediastinal structures or heart. The only time the technique is contraindicated because of the fear of hemorrhage is in hemophilia. We have had no trouble with bleeding from a low platelet count or a low prothrombin value. Infection is of minor concern if one follows strictly sterile technique. Penetration of the mediastinum and/or puncture of the heart result from uncontrollable pressure on the needle and poor, hasty technique in sternal aspirations.

Cardiac Pain *

ROBERT S. DYER, M.D., F.A.C.P.

Louisville

Mr. Moderator, Members and Guests of the Kentucky State Medical Association, after having been chosen the Orator in Medicine for 1954, I, in deep gratitude and sincere humility, was much perplexed over the choice of the subject of this oration. This being the last officially scheduled Oration in Medicine, I decided that an agonal topic, namely, Cardiac Pain, would be altogether fitting and proper for an equally agonal oration.

In most instances, cardiac pain is a form of "referred pain". The sensation is not recognized as coming from the heart, but seems to come from that part of the body wall which is supplied by afferent fibers from the same posterior nerve roots as the heart.

Myocardial ischemia is the principal abnormal stimulus, and the area of reference corresponds to the first four thoracic spinal cord segments. Sometimes there is sensory radiation to adjacent areas of the cord; this explains the location at times of cardiac pain outside the region to which it usually is referred.

Often there is tenderness and reflex muscle spasm in the involved part of the chest. The muscle spasm possibly accounts for part of the feeling of pressure that attends some causes for cardiac pain. There may also be viscerosecretory reflexes in the form of vomiting, diarrhea, or excessive salivation or urination.

Finally, there may be a summation of afferent impulses in some cases. An example is the patient who previously has experienced pain elsewhere in the body from some other cause, for instance, gallbladder disease. If this patient develops heart pain, he is likely to have pain not only in the cardiac dermatomes but also in the abdomen.

The non-cardiovascular conditions that mimic heart pain are esophageal lesions, gastro-intestinal disorders, pulmonary disorders, and musculoskeletal lesions. The main cardiovascular causes for cardiac pain in the order of reversed importance are neurocirculatory asthenia, pulmonary hypertension, dissecting aneurysm, aortic aneurysm, pericarditis, active rheumatic myocarditis and coronary insufficiency.

Non-Cardiovascular Conditions

Many conditions may mimic cardiac pain. With regard to diagnosis, the important ones are those that mimic the pain of coronary insufficiency. Not all of them merit equal emphasis in this discussion.

ESOPHAGEAL SPASM. This condition commonly causes a little ache or feeling of discomfort immediately behind the lower part of the sternum. Usually it appears after eating or drinking during periods of emotional tension. The diagnosis is readily apparent with an esophagogram in cases of severe cardiospasm. Milder forms of cardiospasm or esophageal spasm may give no evidence of their presense by X-ray examinations unless the examinations are made while the spasm is present, that is, while patients are having their discomfort.

HIATAL HERNIA. Patients with small esophageal hiatal hernias commonly have chest pain similar to angina pectoris. But dyspnea or gastrointestinal disturbances are more common in large diaphragmatic hernias; anginal type pains are noted less often in this condition. It is easy to understand the similarity to angina pectoris of the pain of certain esophageal lesions. If it is recalled that the afferent nerves on the lower end of the esophagus and the upper end of the stomach have very much the same distribution in the spinal cord as the cardiac nerves, this similarity is evident.

Distinguishing esophageal trouble from angina pectoris depends greatly upon careful history-taking. The main distinguishing features are many. (1) Exertion may or may not cause pain. In cases of hiatal hernias, pain is often provoked by exertions that increase intra-abdominal pressure (bending forward, lifting). Position is also a factor in this disease, especially is pain noted when lying down soon after eating. (2) Swallowing may precipitate angina-like pains, a feature which is rarely seen with cardiac pain. (3) Dysphagia is a common symptom. (4) Duration of pain is usually longer than is noted in angina pectoris. (5) Atropine or its derivatives relieves esophageal pains whereas nitroglycerine may relieve both. One good way of using this drug is in the form of

*Oration in Medicine delivered before the Annual Meeting of the Kentucky State Medical Association, Louisville, September 21, 1954.

tincture of belladonna, giving it in gradually increasing doses until the patient has taken all that he can tolerate. Then if his episodes of pain disappear, a diagnosis of esophageal lesion is favored over one of heart disease.

Gastric Lesions. Occasionally functional distention, cascade deformity, or a gastric diverticulum may cause substernal pain. Associated dyspepsia and a larger component of pain in the epigastrium suggests that a digestive rather than cardiac disorder is the reason for the chest pain. X-ray studies help solve the problem. Major diseases, such as cancer and peptic ulcer, do not cause confusion.

Gallbladder Disease. This condition is much more important. Everyone has had experience with patients in whom gallbladder disease is difficult to diagnose. Although the main manifestations of gallbladder colic are well known, confusion of this colic with an episode of myocardial infarction is easy at first. This confusion may be heightened as time goes on because temporarily the electrocardiogram may become abnormal in an elderly patient who has had an attack of gallbladder disease. Only close attention to the history and careful study of the patient's course, including serial electrocardiograms, will resolve such difficulties.

Splenic Flexure Syndrome. Distention of the splenic flexure of the colon by gas or feces is the mechanism of angina-like symptoms in the splenic flexure syndrome. Factors which provoke this syndrome are emotional tension, constipation, eating and lying down. These symptoms are relieved by expulsion of feces or flatus spontaneously or as the result of an enema.

Spontaneous Pneumothorax. This disease sometimes causes a pleurisy-type of chest pain but on other occasions there is a strong resemblance to coronary insufficiency. Massive or small collapse of the lung may cause dyspnea and retrosternal pain. A small accumulation of air commonly escapes detection when only the usual P-A film is obtained. A lateral film or an oblique film may show the small pneumothorax.

Mediastinal Emphysema. This is another cause for pressure-type substernal pain and the spontaneous variety especially may be mistaken for a heart attack. This condition may occur in pneumonia with a severe cough; the pulmonary alveoli rupture, thus causing interstitial emphysema of the lung with air migrating along the bronchovascular trunks to the mediastinum. This development is distinguished from myocardial infarction principally by a history of onset after severe coughing and by discovery of a peculiar crunching, crackling sound in the region of the sternum (Hamman's sign), plus evidence of mediastinal compression as evidenced by dyspnea and cyanosis. The area of cardiac dullness will usually disappear and when the air dissects upward and appears in the soft tissue of the neck or elsewhere in the body, there is no problem in establishing the diagnosis. Pneumothorax may follow mediastinal emphysema and may at times add to the confusion.

Musculoskeletal Lesions. Of the musculoskeletal lesions that are likely to mimic cardiac pain, the most important are arthritis and intervertebral disc syndrome affecting the cervical or thoracic spine. These conditions cause pain along the front of the chest because of the compression of the spinal nerve roots. This may be apparent when the patient produces pain by moving his neck, hunching his shoulders or bending back in a certain manner. However, the diagnosis is not so obvious at times and will require further studies. Positive X-ray findings are not necessarily diagnostic for minimal X-ray changes may cause pain. However, when pain responds to traction a diagnosis of vertebral involvement is probable. It must be borne in mind that patients may have both angina and osteoarthritis and, therefore, the patients' history is more valuable than special studies.

A fractured sternum may cause some difficulty in the differential diagnosis, but tenderness over the area of fracture will help to decide the true nature of the condition.

Neurocirculatory Asthenia

The cardinal symptoms of neurocirculatory asthenia are chest pain, palpitation, a respiratory sigh and a constant feeling of exhaustion. These symptoms make patients think that they have angina and even some physicians make this error.

The mechanism for this chest pain according to Friedman is due to the limited use of the diaphragm and the consequent intercostal breathing which causes the heart to lie close to the chest wall during all of the respiratory cycle. So this pounding of the heart against the chest wall causes the precordial aching. Sometimes the chest pain is more severe, coming as a sharp jab. This is usually due to occasional premature beats.

The quality of the pain is different in neurocirculatory asthenia. It is either an ache or a sharp pain and seldom has a quality of constriction. The pain follows exertion rather than coming during exertion. The heart in the electrocardiogram is normal except that occasionally there is transient or positional inversion of the T waves in Leads II and III. Commonly there are other evidences of sympathetic overactivity. Of course, the prognosis for life is excellent. Finally, the location of the pain is important. The pain of angina is usually substernal or just to the left of the sternum. The pain of neurocirculatory asthenia is out toward the apex or along the costal margin.

Pulmonary Hypertension

The idea is comparatively new that hypertension in the pulmonary circulation can cause chest pain. The mechanism is believed to be a sudden increase of distention of the pulmonary artery. The nerve fibers of the pulmonary artery have a distribution similar to those of the heart and therefore the pain closely simulates that of angina pectoris or coronary failure.

Comparison of Pain Due to Pulmonary Hypertension with Angina Pectoris

SIMILARITIES:

1. Quality
2. Location
3. Intensity
4. Relation to exertion
5. Relief by aminophylline

DIFFERENCES:

1. Demonstration of cause for isolated pulmonary hypertension
2. Associated dyspnea, cough, cyanosis
3. ECG; right ventricular hypertrophy
4. Striking relief by oxygen
5. Failure of nitroglycerine

This pain is observed in conditions such as mitral stenosis, primary diffuse diseases of the lung (asthma, emphysema), certain types of congenital heart disease, and pulmonary embolism. However, there are instances of angina decubitus in which left ventricular failure is the precipitating factor and in which chest pain is not influenced by nitroglycerine but persists until the heart failure is relieved. There is no way to be sure whether such pain is due to pulmonary artery distention or coronary insufficiency. On the other hand, it is equally hard to be sure whether or not coronary insufficiency plays a part in the pain related to isolated pulmonary hypertension.

Aneurysm

The pain of dissecting aneurysm differs from that of myocardial infarction in that it is more often maximum from the start, often radiating toward the back and sometimes downward. Dissection distally from near the aortic valves may result in sagging of the aortic leaflets and thereby suddenly causes aortic regurgitation. The peripheral pulses may be asymmetrically changed as the dissection passes their aortic origin. This is a valuable clue. Similar occlusions may take place as a result of arterial embolism in infarction, but this occurs much later after the onset of pain. Chest X-ray usually shows generalized enlargement of the aorta, especially when compared with previous films. The odds are ten to one against recovery from dissection of the thoracic aorta, a reversal of the statistics for myocardial infarction which are ten to one in favor of the patient.

Chest pain is the most common complaint of patients with thoracic aortic aneurysms. However, dyspnea and cough are also important. There are two possible mechanisms for this pain. The more common is compression of other structures, particularly the thoracic cage. Other structures capable of transmitting sensations of pain may also be compressed. The second reason for chest pain is coronary insufficiency resulting from syphilitic occlusion of the coronary ostia.

Pericarditis and Rheumatic Carditis

Most cases of pericarditis are entirely painless since the visceral and parietal pericardium is mainly insensitive. However, the lowermost part of the parietal pericardium is supplied by fibers from the phrenic nerve that carry the sensation of pain. Therefore, involvement of the lower parietal pericardium or extension to mediastinal pleura by an inflammatory process causes pain that is substernal, precordial, or in the left shoulder area, according to the portion of the pericardium or pleura involved.

Since the chest pain is similar, in loca-

tion and abrupt onset, to myocardial infarction, the symptoms may suggest cardiac pain and the differential diagnosis may become difficult. This is especially true for idiopathic pericarditis. However, with mediastinal pleural involvement the pain of pericarditis may be aggravated by breathing, twisting the body or at times by swallowing. Fever tends to be higher and the heart shadow increases abruptly with effusion in pericarditis. The friction rub of pericarditis occurs much earlier and lasts longer. Serial electrocardiograms will help make the differential diagnosis, especially when taken early in the disease. The difference in prognosis is obvious and although many patients with idiopathic pericarditis may have a stormy course, the prognosis is generally better than myocardial infarction.

Another type of chest pain which is rare and may easily be overlooked is that caused by rheumatic carditis. It is a mild precordial ache not well localized. Although this pain is not a valuable aid in diagnosis it has some prognostic significance. Its presence means that the rheumatic heart disease is severe. Rheumatic heart disease may cause other forms of cardiac pain; these are the pain of pericarditis and possibly angina pectoris.

Coronary Insufficiency

In its most general sense coronary insufficiency means that the blood flow to the myocardium is less than it should be. This happens when coronary flow is reduced or the demand for blood is increased without a corresponding rise in supply or both.

Table 1 is a partial list of the causes for coronary insufficiency. The only purpose in making such a list is to emphasize that many factors may independently contribute to this condition. It is obvious that arteriosclerosis of the coronary arteries is a cause for coronary insufficiency. It may not be so obvious that severe hypertension is the cause, unless we take into consideration the elderly man who has not previously had symptoms of this coronary artery disease and who develops myocardial infarction as a consequence of going into shock during an operation. In this case the fall in blood pressures further impairs filling of the coronary arteries and the result is a most unfavorable one.

Table I. Causes of coronary insufficiency

A. Disease of the coronary arteries
   1. Arteriosclerosis
   2. Congenital abnormalities
   3. Embolism
   4. Thromboangiitis obliterans
   5. Other vascular diseases
B. Disease of coronary orifices
   1. Syphilitic aortitis
   2. Dissecting aneurysm
   3. Vegetative endocarditis
C. Compression of coronary arteries
   1. Pericardial effusion
D. Diminished cardiac output
   1. Severe hypotension
   2. Aortic stenosis
   3. Bradycardia
   4. Tachycardia
   5. Myxedema
E. Diminished blood pressure
   1. Severe hypotension
   2. Tachycardia
   3. Aortic regurgitation
F. Diminished oxygen delivery
   1. Anemia
   2. Anoxia (high altitude, pulmonary disease)
G. Increased cardiac work
   1. Thyrotoxicosis
   2. Hypoglycemia
   3. Epinephrine injection
   4. Severe exertion

The principal syndromes of coronary insufficiency are six in number: (1) angina pectoris, (2) coronary failure (coronary insufficiency; premonitory pain), (3) myocardial infarction, (4) congestive heart failure, (5) disturbances of rhythm or conduction and (6) sudden death. Only the first three provoke pain and various combinations are seen. Of course, a patient may have coronary artery disease and never have clinical evidence of it. This is a common enough post-mortem disclosure.

A number of factors influence the pain that results from coronary insufficiency. Obviously the degree and duration of myocardial ischemia are most important. As with any other type of pain, the sensibility and intelligence of the patient are also modifying factors.

Angina Pectoris

A patient with angina pectoris seldom has other complaints; this is helpful in making a diagnosis. On the other hand, angina is easily confused with other symptoms, notably dyspnea. It can be quite difficult to decide whether a patient is describing chest pain or a sensation of discomfort in breathing. This only emphasizes the importance of careful history taking; a diagnosis of angina pectoris is based entirely on the patient's history.

EXCITING FACTORS. Exertion is the most common exciting factor. As a matter of fact, we might say that pain is invariably provoked by exertion in patients who have angina pectoris, if it were not that some patients, because of illness or other circumstances, never exert themselves. Eating, followed by exertion, is another important exciting factor. Eating as a factor alone is less common. The influence of emotion is well known.

Cold may play a part in various ways. Getting into a cold bed, walking in the wind on a cold day, drinking ice drinks or shoveling snow may provoke the symptom. Certain parts of the body are special "trigger" zones for some angina patients. The best known are the face in the region of the nose and the palmar side of the wrists.

Recumbency as a cause for angina pectoris sometimes has a very grave prognostic significance. We think of angina so much in terms of effort that when it comes in a patient who is lying in bed, it startles us, and usually it is serious. There are exceptions, however. Occasionally angina that comes during recumbency at night is due to nocturnal hypoglycemia, which can be prevented.

Hypoglycemia at any time of day can provoke severe angina. Here the mechanism is believed to be an increase of cardiac work resulting from liberation of epinephrine. This factor is most common in patients having coronary artery disease, plus diabetes, with insulin being given for the latter disease. Proper regulation of diet and insulin dosage should remove this factor.

Other exciting factors include swallowing and the use of certain groups of muscles (sexual), but are comparatively rare.

QUALITIES. In about forty per cent of cases, the chest pain is almost always a sense of constriction, tightness or pressure, rather than that of actual pain, although it may rise to the level of pain if the provocative factors continue. In about thirty per cent the description of the chest pain is so vague that an accurate entry cannot be made of the quality of the discomfort. In about twenty per cent the pain is aching. In five per cent, it is a burning quality and only rarely is the discomfort described as sharp.

The pain is more often mild than severe. It is usually brief in duration, seldom lasting more than two minutes after cessation of physical effort and often subsiding in 15 to 30 seconds, although it may go as long as 30 minutes.

Relief from angina by rest is well known. In patients in whom hypoglycemia is a provoking factor, eating affords relief. The administration of a vasodilating substance like nitroglycerine also relieves the pain. Nevertheless, it is obvious that the effect of nitroglycerine should not be used as a pathognomonic sign of coronary disease. The drug may relieve pain in a variety of conditions, including fibrositis, spondylitis, neuritis, spasm in the gastrointestinal tract, biliary or renal colic and anxiety. However, here too a careful history may be helpful in differentiation. In angina pectoris the relief of pain, when it occurs, is usually prompt and complete; whereas, in functional pain, the effect is slower and less definite. In angina pectoris, also, nitroglycerine is very effective prophylactically when taken before the patient undergoes any exertion which is known to cause pain, especially when angina pectoris goes away so quickly of its own accord that we sometimes have trouble appraising the value of nitroglycerine. If then the patient can undertake that exertion without experiencing any pain, it is almost sure that angina pectoris has been described.

Belching brings relief from angina in some patients. Often this serves to confuse the patient; sometimes the doctor. Mild pain that goes away with a good belch hardly suggests heart trouble, and a serious disorder may be passed off as simple indigestion.

LOCATION. Angina is not sharply localized. Occasionally with myocardial infarction the patient will point to the area of his discomfort. This rarely happens with angina pectoris. The patient does not point with the finger; he uses either one or both hands, laying them on his chest in the large area where he has been feeling uncomfortable. In ninety-five per cent of the cases the pain is most intense immediately substernal or just to the left of the sternum. Pain does not occur along the costal margin or out toward the apex of the heart. Again, myocardial infarction is different in this respect. Myocardial infarction pain may occasionally be located in the apical region of the heart.

Angina occasionally spreads to extrathoractic regions, namely: epigastrium, shoulders, jaws, arms or back. Once in a while angina pectoris has a kind of retrograde development. The patient begins having discomfort in his arms on exertion.

As time goes on (sometimes weeks or months later) a similar aching type discomfort, felt vaguely in the arms, spreads to the center of the chest. However, location of pain is not too helpful when we realize that every three out of four whom we suspect of having angina pectoris have some co-existing disease that could equally well produce chest pain. Musculoskeletal lesions and minor disorders of the esophagus are most common.

Clinical Significance. Angina pectoris is always diagnosed exclusively from the patient's story. Collateral tests of various kinds may or may not lend some support to the diagnosis in an individual case. The routine electrocardiogram is within normal limits in about one patient out of every five. The electrocardiogram during pain may show S-T segment depression and T-wave inversion.

Generally angina pectoris has a bad prognosis. The average duration of life after onset is about ten years. Associated factors for poor prognosis are distinct abnormalities of the electrocardiogram, cardiac enlargement, hypertension, previous myocardial infarction and congestive heart failure. But these facts about prognosis have no immediate application in an individual case. Some patients live many years without deteriorating.

Angina pectoris may signify that infarction is imminent or has already taken place, especially when it appears abruptly in an elderly person, when it becomes more frequent or when pain appears during rest (angina decubitus).

Occasionally angina disappears completely. This may happen during an infarction, possibly because of death of nerve endings in an area of myocardium from which painful stimuli formerly arose. The pain may also disappear following removal of an anemia or hypoglycemia or, more hopefully, because intercoronary anastomoses begin to function effectively as collateral circulation.

Coronary Failure

This second painful syndrome of coronary insufficiency is one for which terminology is somewhat confusing. It represents an episode that is something between angina pectoris and myocardial infarction.

The pain is similar to angina pectoris in quality, location and other characteristics. It is distinguished mainly by a longer duration and by the fact that it may not be relieved by nitroglycerine. About one-half of the patients with coronary thrombosis pass through a premonitory phase lasting hours, days or weeks before final complete closure of the coronary vessel occurs. During this phase the patient who has previously experienced angina pectoris finds that his pain occurs more frequently, more intensely with fewer conspicuous precipitating factors and sometimes without effort at all; even during sleep. Coronary failure and myocardial infarction differ because of the absence in coronary failure of evidences of myocardial necrosis: fever, leukocytosis, fast sedimentation rate and distinctive electrocardiographic changes.

Clinical Significance. Defined in this way, coronary failure has a variable significance. First, it may simply represent prolonged myocardial ischemia that is reversible spontaneously or by means of treatment, so that nothing very bad happens. Second, it may signify impending myocardial infarction that will develop fully within a short time. Finally, pain thought to represent coronary failure may actually represent myocardial infarction which will be disclosed when additional studies are made.

Myocardial Infarction

Premonitory Pain. Coronary failure is a common type of premonitory pain. Angina pectoris is a little less common and is much less likely to attract attention. For example, a patient, previously healthy, begins having angina pectoris. He may disregard this symptom until three or four days later when he has had an attack of myocardial infarction. Then he recalls the vague discomfort which earlier came with exertion, and its true significance is apparent retrospectively.

Incidence of Pain. In several reports the incidence of painless attacks varied from twenty-eight to fifty-three per cent. This is a surprisingly high incidence of painless infarction, but the reason for such reports is apparent when we discover that these are retrospective studies from hospital charts of patients already dead and we can not go back and ask such patients about their chest pain. When working with patients who are still living it is found that more than ninety per cent have chest pain with myocardial infarction. A patient who has simultaneously pain of myocardial infarction and intense breathlessness of acute left ventricular failure is more likely not to notice his chest pain, much less have the breath to complain about it. Sometimes there is no record of

pain because the history is poorly taken or imperfectly recorded.

EXCITING FACTORS. For practical purposes, myocardial infarction has no special exciting factors except conditions that cause shock, including surgical operations. The relationship of exertion to myocardial infarction is confused because some authorities believe cases resulting from exertion should be separated from those occurring spontaneously. This is a debatable practice. Certainly, all of us have seen patients who suffer their first attacks as a result of strenuous exertion. Developing in this way, myocardial infarction has sometimes been ruled a compensable illness in spite of evidence that coronary atherosclerosis pre-existed.

QUALITIES. The quality and location of the pain are not remarkably different from angina pectoris. As already mentioned, it is more often felt toward the apex or in the arms than is the case in angina pectoris, although the substernal and left parasternal regions are the usual sites.

An important distinguishing feature is that the time of onset is often indistinct. The patient cannot name the hour the pain began, as he might with perforation of a duodenal ulcer or with gallbladder colic. The pain builds up gradually to a peak intensity and then, if observed long enough, fluctuates to some extent. Nitroglycerine is usually ineffective; opiates are needed for relief.

Unlike angina pectoris, in which the diagnosis is mainly on the basis of subjective data, myocardial infarction causes obvious objective manifestations. These changes—shock, fever, leukocytosis, fast sedimentation rate, EKG abnormalities—confirm the diagnosis.

CLINICAL SIGNIFICANCE. If all cases are considered, the chances for recovery from uncomplicated myocardial infarction are about ten to one in favor of the patient. Certain features of the pain worsen the outlook: long duration, strict localization to the chest, and a history of premonitory pain.

The ultimate control of coronary artery disease will rest primarily on the prevention of arteriosclerosis. Evidence is accumulating from recent research that this may eventually be possible.

Dr. David T. Bogg, Cornell Professor of Medicine, says: "Present information, although incomplete, and in a large part inferential, indicates that over-nutrition shortens life, predisposes to hypertension, increases the extent of atheromatous plaque formation and possibly increases the tendency to intraluminal thrombosis. It would appear, therefore, that during the period while further scientific analyses of diet are being attempted, a low fat, low calorie diet may be advised with the expectation of partial protection against the rapid development and the complications of atherosclerosis. Since Man is an atherosclerotic animal and since the disease probably affects to some degree most individuals in middle and later life, the advice should not be limited to the obese or to those who have suffered obvious complications of atherosclerosis."

In addition to the low fat diet, the physician can instruct the patient in the recognition and prompt reporting of increased symptoms suggesting the premonitory phase. The institution of anticoagulant therapy at such times may well avert impending coronary closure and hold the process in abeyance until adequate collateral channels have developed. Heparin, sitosterol and many other drugs are under intensive research study in an effort to find an anti-atherosclerotic compound.

In several instances anticoagulant therapy has been discontinued for a needed dental extraction or because of lack of cooperation on the part of the patient resulting in fatal coronary closure taking place within a few days. Disappearance of the premonitory phase and a return to the previous status without anticoagulants have been observed but has been rare. In several cases anticoagulants have been withheld because of uncertainty of the existence of the premonitory phase or for financial reasons and coronary occlusion has occurred shortly thereafter. As a general rule, it is wise to require acceptable anoxia-injury EKG patterns in addition to history before anticoagulants are started. Occasionally such patterns may be obtained only during pain.

It is possible that further experience will warrant prophylactic anticoagulant therapy in angina pectoris which is exceedingly frequent and disabling. Anticoagulants should be given permanently to those who have had both anterior and posterior myocardial infarctions because only the circumflex branch of the anterior coronary artery is left for blood to circulate throughout the myocardium and any clot in this vessel would certainly become fatal.

(Continued on page 425)

CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

Chest Discomfort in a 75 Year Old Female

Case Presented by Department of Medicine

Chief Complaint: "A painful empty feeling comes into my chest whenever I walk."

Present Illness: The patient had been seen infrequently in the General Medical Clinic since 1947 for various minor complaints consisting usually of arthralgia and headache. Complete physical examinations from 1947 to 1951 were normal except for a mild degree of hypertension with a systolic blood pressure ranging from 180 to 210 and a diastolic pressure ranging from 90 to 105 mm. of mercury. The patient was in bed for five weeks in 1951 because of "acute indigestion."

In 1951 the patient began to experience chest discomfort, lasting five to ten minutes, initiated by any moderately severe exertion, especially in cold weather. A typical episode consisted of a squeezing sensation located in the precordium with radiation into the jaw and along the medial aspect of the left arm. Some degree of relief was experienced after rest but she remained highly apprehensive and dyspneic for as long as 20 to 30 minutes. The patient had received no medication for the chest discomfort. These episodes continued to occur several times a day until the present examination.

Past History: Adequately treated in 1935 with arsenic and bismuth, for asymptomatic syphilis.

Physical Examination: January 3, 1954. Pertinent findings were confined to the cardiovascular system. The retina revealed a grade I retinopathy consisting of arteriolar narrowing with some increase in the light reflex. The heart was enlarged to percussion. The rate was 80 and the rhythm was regular. A systolic murmur was heard at the base of the heart, loudest to the left of the sternum and poorly transmitted into the neck. The blood pressure was 160-164/80-84. There was no evidence of congestive heart failure.

Laboratory Studies: The only abnormality was an elevation of serum cholesterol to 310 mg. %. The blood and spinal fluid serology was normal.

X-Ray: Showed moderate cardiac enlargement involving chiefly the left ventricle. A marked aneurysmal dilatation of the ascending aorta was noted with calcific deposits within the wall.

Electrocardiogram: Was abnormal and suggestive of an old posterior wall myocardial infarction. Left ventricular preponderance was also present.

Discussion

J. Murray Kinsman, M.D., Chairman of the Department of Medicine: Exertional chest discomfort in a patient is always suggestive of coronary artery insufficiency. Angina pectoris is not a disease, but is a symptom complex usually due to an imbalance between coronary arterial flow and the demand of the myocardium for oxygenated blood. The syndrome is usually due to partial closure of a vessel lumen by an atherosclerotic process but may rarely be due to inflammation, embolism or hemorrhage.

The diagnosis of coronary artery insufficiency with angina pectoris is best made on the basis of a complete history, since the physical examination is often essentially non-informative. Occasionally in the presence of an atypical history or concomitant disease the diagnosis may be very difficult. In this particular patient, the chest discomfort was certainly suggestive of angina pectoris but the X-ray evidence of an aortic aneurysm was disturbing. The electrocardiographic response to calibrated exercise (Master's Test) is often very helpful, as was the case here. Figure I shows a very abnormal response to exercise and was very suggestive of coronary artery insufficiency.

The management of angina pectoris consists of more than the use of nitroglycerine for the relief of chest discomfort. The routine management as practiced in our medical clinic will be summarized by Dr. Best.

Maurice M. Best, M.D., Assistant Professor of Medicine: Much can be done to improve the physical and mental state of the

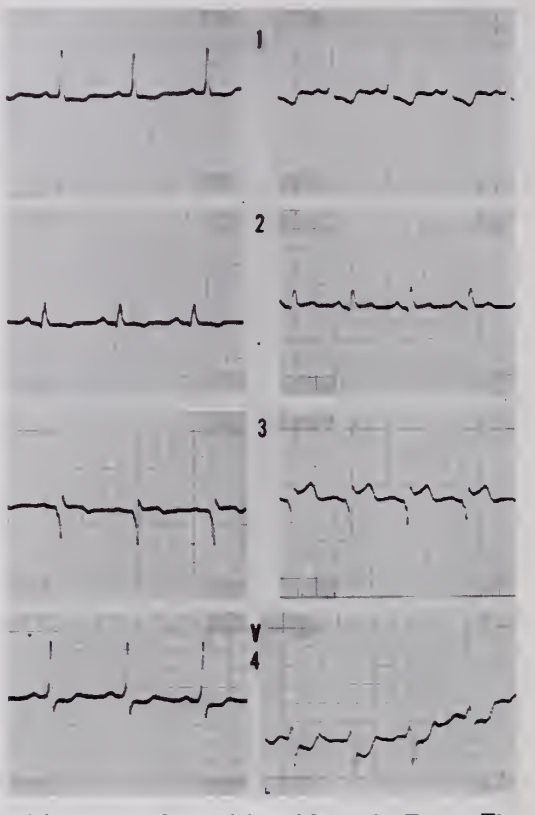

Figure 1. A positive Master's Test. The resting electrocardiogram in the column on the left shows evidence of posterior wall myocardial infarction. Following exertion, the column on the right shows abnormal S-T segment changes in leads I, III and V 4. In lead II the previously inverted T wave has become upright. During the test the patient experienced a typical anginal attack. It was promptly relieved by nitroglycerine.

patient with angina pectoris. It should be explained to the patient that the discomfort is a helpful warning which when heeded may aid in preventing serious permanent damage to the heart muscle. (myocardial infarction). In this respect, angina becomes a useful symptom and when used as a caution light may serve to remove the dread of sudden death so common in these patients. Our patients keep a daily diary recording the circumstances surrounding each episode. The experience gained from this diary often helps in the prevention of stressful situations. Nitroglycerine should be used as a prophylactic agent and also as the best treatment for the immediate attack. Mild sedation and the maintenance of a proper weight are simple but very helpful aspects of treatment. The diet should be low in calories, cholesterol and fat.

Question: Are vasodilator drugs useful in the prevention of angina?

DR. KINSMAN: We have outlined our use of nitroglycerine. On occasions, we also use Peritrate and Paveril since their use is rarely accompanied by toxic reactions. Their effectiveness is difficult to evaluate, however, due to the vagarity of the symptoms.

Question: Is whiskey useful in the treatment of angina pectoris?

DR. KINSMAN: Ethyl alcohol has some sedative value and thus may be useful in limited amounts in cardiovascular disease. It probably is not an effective coronary vasodilator but its use has the approval of cardiologists generally.

Question: Are radioisotopes useful in angina?

DR. BEST: Abalation of the thyroid by the use of I^{131} may act to decrease the work of the heart. Dr. Kerman of our Isotope Laboratory has treated several patients for us. It appears to be useful in some patients but the effect may be transitory, requiring treatment.

Question: Has an attempt been made to lower the abnormal cholesterol values in this patient?

DR. BEST: Yes, this is one of a group of patients to whom we have administered the plant sterol, sitosterol. Sitosterol acts to inhibit the absorption of cholesterol and possibly other lipids from the intestinal tract. Following 52 weeks of sitosterol administration without dietary modification the serum cholesterol has been maintained at a normal level, the actual reduction being from a pre-treatment mean value of 237 mg.%. Sitosterol is still purely in the investigative stage and any conclusions as to its clinical effectiveness await further studies. It does offer a means of studying the effect of a lowering of serum cholesterol in atherosclerosis.

SPECIAL ARTICLES

MAKING CONFIDENCE A CORNERSTONE *

CLYDE C. SPARKS, M.D.

K.S.M.A. President

Ashland

This is a splendid occasion and represents another milestone in the providing of facilities for the care of our sick people. I wish to commend the church for its assuming a part of the obligation in providing some of these facilities, and I think it is extremely commendable that any organization will go forward in providing hospital space or in any other project without government aid or subsidy. This is not only a fine basic concept but is economically sound.

It is interesting to stand here this evening and review in our minds the progress of hospital construction over a period of years, and much of the fine work must be attributed to many fine loyal individuals who when finding communities either unaware of, or unwilling to accept their responsibilities in providing hospital space would do so purely as a private venture. In most respects, this has been fine.

The movement of accreditation I am sure will continue, and we are looking forward to the time when every hospital in Kentucky will bear the seal of approval of the Joint Accrediting Committee from the American Medical Association, the American College of Surgeons, the American College of Physicians, the American Hospital Association and the Canadian Medical Association. I would be remiss in my duties this evening if I did not pay respect to the American College of Surgeons for its fine work in carrying this program alone for so many years. The public, too, is unaware of the millions of dollars given by the surgeons themselves to insure the American people that in whatever hospital they chose to enter as a patient, they were reasonably sure of having adequate facilities for the diagnosis and treatment of their particular problem.

This evening marks the beginning of organizing a new staff for a new hospital and many problems will, of course, present themselves for solution. There are almost no problems that cannot be solved if the governing body and the medical staff will take each other into their confidence and logically discuss how best to arrive at adequate care for the sick of our nation. Working together in harmony in the organization of a new hospital and its staff can be a great adventure and great fun. Working without harmony can make of it a dull, uninteresting and distasteful period.

First of all, I think we must realize as doctors we do not own the hospital and that the method of operation and business management and that the providing of certain ancillary facilities are not within our prerogative, but at the same time it is very necessary that the governing body keep in mind that a hospital is an institution in which medicine is to be practiced and not an institution to practice medicine. If both the governing body and medical staff keep these basic concepts in their minds, there will be no occasion for disunity. Each will have to rely on the other for advice and guidance in their respective spheres of operation.

Staff organization is a problem that this group must first of all tackle and I would assume that all reputable practitioners in your community are eligible for staff membership in such capacity as they are qualified by experience and training. This problem has a practical danger as far as promoting disunity among your hospitals and among members of the local medical society is concerned, but there are many ways of arriving at a logical conclusion. My advice at this moment would be to have rather strong departmental standards which can well be done without excluding competent personnel. There was never in my thinking a time in our country's history when we needed unity in every respect more than we do now. From personal knowledge I am sure that all the facilities for the care of the sick in a community, including hospitals and medical

*Presented at the dedication of the Central Kentucky Baptist Hospital, Lexington, May 9, 1954.

personnel, should be united in an unselfish devotion to this end.

It has been said that if we could remove the "i" from sin it would vanish. The divide and conquer squeeze, ladies and gentlemen, is on in this country and if we in our selfish attitudes do not act rationally as a unit the results can be very disastrous. Let me plead with you now to avoid selfishness if for no other reason than the very good one that the patient ultimately is the one to suffer. This can be done without compromise of problems that are basic and that have been mentioned earlier.

I would like to talk to you briefly about hospital and medical care expense. Many patients do not differentiate hospital and medical care expense, thinking only of the total amount it costs them to be ill. If for no other reason than this, it behooves the members of the medical profession to be active in helping keep hospital costs down. This, of course, is a cooperative program involving the hospital, staff, and the patient. . . It is very much like a three-legged stool which will never balance properly if one leg is too short, too long, or missing entirely.

The cost of hospitalization can be placed in two categories. First, the total amount spent in a community, county, state or nation for hospital service, and second, the amount an individual pays when it is necessary for him to be hospitalized. The first may seem to be addition of all the individuals hospitalized during a given period of time, but such is not the case, and if the doctor and his patient take the time to discuss the problem of hospitalization, many admissions can be saved, obviating to a very definite degree the amount of costly construction necessary in our hospital program. With an over-expansion of hospital facilities in many communities to the extent that empty beds are available, hospital costs for the paying patient must of necessity go up, and I am sure that no one knows better than the hospital administrator how expensive an empty bed is. If we pass the cost of construction and operation on to the patient in the form of cost per patient day and the medical staff keeps too many beds empty, either further construction must be curtailed or unnecessary hospitalization be condoned—neither is necessary if we accept a period of adjustment without panic.

We know that we as doctors can and should help in supporting a planned program for the hospitalization of the chronically ill and the indigent and believe that insofar as at all possible this problem should be solved at the community level. When this major problem is solved, the cost of construction will be less, the cost per patient day will, in an over-all picture, decline, and more general hospital beds will be available without additional expensive construction and staffing. This is, first of all, an education program and the doctor should be a leader in this movement.

With the family unit being broken by industrial and other displacing agencies, domestic help being scarce and expensive, and the nurse recruitment programs not yet being adequate to supply all the needs, it should be obvious that our chronically ill must pay acute general hospital rates when not needed. Costs can greatly be lowered here.

It is my hope that in connection with many of our fine hospitals the staff will initiate jointly with the governing body a program for the care of the chronically ill.

I would urge on the newly-formed medical staff importance of three committees and I urge this not because of some ill-advised articles that have appeared in the lay press or because of some ill-advised journalistic titling of articles appearing in some of our periodicals. In no sense do I suggest this because of any fear even though the public has been led to believe that many of our fine hospitals and the doctors privileged to work there tolerate, condone and approve unnecessary medical and surgical practices or even poor quantity. This, of course, in most instances is utterly fantastic.

I do urge the active use of these three committees for one reason only and that reason is that it is just basically right and is something we should do irrespective of what some group or groups think or do not think. I urge the appointment of a strong Executive or Liaison Committee, chosen with extreme care in order that mutual problems may be worked out without emotional tirades or castigation of each other. If this is done, mutual problems can be resolved without much difficulty.

Second, I would urge the appointment of an Auditing Committee of men who are strong and fearless and at the same time have an adequate concept of the problem both the hospital and staff face, in regard to hospital and professional insurance contract carriers. A medical audit in your hospital will allow both the medical staff

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EDITORIALS

WE, TOO

James G. Wilson, retiring president of The Kentucky Press Association, in the annual address delivered in Louisville January 28, 1955, gave expression to a very fine philosophy when he said:

"Here I would inject some constructive self criticism, feeling that in some isolated cases we may be inclined to feel the world owes far more press courtesies than are rightfully ours. To be sure oftentimes we have to fight for the bare essentials, but in some cases I fear we are inclined to have our feelings hurt if we are not placed on a pedestal, where we may cogitate in our Ivory Towers, and be separate and apart from the world. To my way of thinking, the time has come when the Kentucky editor should not assume the role of the old-time rural minister, who expected, if he did not demand, a fried chicken dinner on each and every occasion of his visits to the community, not to mention the gratis gifts, extra courtesies, and special considerations that were a part of those times.

"Let's don't ask for special privileges —there are already too many blocs in our country today seeking individual gain at the expense of the general welfare. There is a certain rightness about our profession, and those who play the game by the rules of highest journalistic ethics have nothing to fear but fear itself. As long as men are able to read they are going to buy our home town newspapers to see what they and their neighbors have been doing and how goes the community. There will be continuing competition from other media, but ours will continue to enjoy success only if we put forth our best efforts, and justify the confidence our communities have imposed in us."

Let us not belabor these phrases by attempting to point out their "spiritual application." It is sufficient to state that as one noble and time-honored profession to another we appreciate and endorse so commonplace yet so lofty an ideal. We share this aim, to best serve the people of Kentucky. Mr. Wilson's observations are well worth our attention.

Sam A. Overstreet, M.D.

IS VAGOTOMY A LOGICAL TREATMENT FOR DUODENAL ULCER?

Duodenal mucosa has amazing regenerative properties. Individual injuries may produce breaks in its surface but these heal very rapidly providing gastric acidity is anywhere near normal. The continuing trauma of excessive gastric secretion seen in the ulcer prone patient is a different matter. Repair has difficulty in keeping pace with the destructive influence of the constant and unreasonably large amount of acid which pours over the area and so recurrent or persistent ulceration occurs. Inflammatory edema and contraction of scar tissue about the ulcer aggravates the situation by adding an obstructive factor to the problem.

Surgical interruption of vagus impulses dramatically eliminates excessive gastric secretions permanently. The rate of regeneration can now exceed the rate of erosion with the result that prompt healing usually occurs.

Gastric vagotomy does not alter the remaining phases of gastric secretion nor for that matter the function of any of the other abdominal viscera. It definitely does not produce regional anesthesia. The presence of food within the stomach and intestines still calls forth a normal amount of normal strength juices to allow digestion to proceed naturally. However, the acid in this juice is secreted only in the presence of food. This is immediately converted to combined HCL which is harmless to the mucosa.

There is usually temporary atony of the stomach following vagotomy. This may result in relative obstruction at the pylorus until the intrinsic nerve supply of the stomach takes over (Meissner's and

Auerbach's plexuses). This atony seldom lasts longer than a few weeks if care is taken to avoid stretching the stomach during the immediate post-operative period. In those cases where scarring has narrowed the outlet of the stomach the surgeon has learned to accompany the vagotomy with a drainage procedure. Pyloroplasty would seem to be the more physiologic approach to the drainage problem, although in a few cases technical difficulties may make gastroenterostomy safer to perform. Efficient drainage coupled with sensible intake of food immediately postoperatively has practically eliminated the once frequent foul eructations and fermentative diarrhea which were seen in the earlier experiences with vagotomy.

Once the patient has passed the atonic phase further gastrointestinal supervision is seldom required. He can eat without regard to his previous trouble. He usually gains weight up to normal for his age and height. Seldom does he lose weight. Irregular bowel habits, secondary to restricted eating habits of pre-operative days, are corrected by return to normal diet. In short, the patient no longer has to cater to his digestive tract.

The occasional failure of an ulcer to heal is now generally thought to be due to an incomplete vagotomy, though it is conceivable that an occasional deeply penetrating posterior wall ulcer may have reached an indolent stage where only local excision, as in wedge pyloroplasty, will yield a cure. Extensive resection of normal stomach, which incidentally is irreversible, is reserved for the unusual case which has failed to respond to simpler operative measures.

More than ten years of experience has shown that the operative mortality of vagotomy and pyloroplasty is only about half that experienced with procedures of greater magnitude, a situation that is all the more welcome since duodenal ulcer is a benign disease. This information, coupled with the fact that the end results seem to be equally as good if not better than those obtained with procedures of greater magnitude, should lead one to give serious consideration to vagotomy and pyloroplasty when surgery is contemplated for the treatment of complicated duodenal ulcer.

HOWARD E. DORTON, M.D.

WE ARE ONE

Physicians engaged in private practice comprise by far the largest single body in our profession. They predominate organized medicine. They, to the mind of the public at large, set the pace and form the pattern of American medicine. To them is attributed in large measure our past and present achievements and likewise toward them, in even a larger measure, has been directed most of the criticism which, in the past two decades has been widespread and sometimes more vicious than constructive.

It is probable that we of this larger group have attached greater importance to our function—the retail or "package" distribution of health—than we rightly deserve. Decreased infant mortality, improved health of all and resulting longevity, the gratifying end products of our American Medical System have resulted largely from better nutrition, the control of epidemic diseases, the conquest of infectious diseases by the newer drugs, better sanitation and the high ratio of physicians to the general population which our Country enjoys.

The private practitioner has been less responsible for these measures than have the Public Health Services, medical research and the expansion of Medical Education. Reserve Medical Officers, drawn from private practice, did much toward our favorable experience in health and salvage during the recent wars but the fundamentals of good military practice were learned and established through long, lean years of patient effort between wars by doctors who had chosen military medicine as a career.

Those of us who are privileged to serve as Civilian Consultants for the army find the men in charge of services at Fort Knox highly trained, board qualified in their respective specialties, conscientious, diligent and efficient in their work. The Reserve Officers assigned to them have every opportunity to practice good medicine and advance their training both in chemical work and in various research enterprises in progress. Teaching conferences and inter-service consultations are carried out with the same diligence that we find in

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ORGANIZATION SECTION

Color Television to be Featured at '55 Annual Session

Color television, making its first appearance in Kentucky as a medical prostgraduate teaching medium, will be one of the top features at the 1955 Annual Meeting of the Kentucky State Medical Association, September 27, 28 and 29 at the Columbia Auditorium in Louisville, Clyde C. Sparks, M.D., Ashland, KSMA president, announced.

The highly popular innovation of the 1954 meeting, which was the setting aside of an afternoon for specialty group meetings, will be repeated this year, according to Dr. Sparks, who is also chairman of the Committee on Scientific Assembly.

This year nine specialty groups, including the Academy of General Practice, will participate in this very carefully planned and highly profitable scientific program. Other features planned for the meeting will be the annual KSMA Golf Association tournament, technical exhibits and the highly effective scientific exhibits.

Rudy Noer, M.D., professor and head of the Department of Surgery of the University of Louisville School of Medicine, has accepted the chairmanship of the special color television program committee. Dr. Noer was chairman of a similar committee set up for the same purpose at the Grace Hospital in Detroit and is familiar with this type of program and working with the Smith, Kline and French laboratories which, said Dr. Sparks, were good enough to assign their color-T-V equipment for use at the 1955 KSMA meeting.

Dr. Noer

Participants in the color television program will be selected from men in the Louisville area, Dr. Sparks said, because of the necessity of numerous rehearsals. Members residing outside of the Louisville area, it was stated, will be chosen to take part in the other scientific sessions during the meeting.

The program will be broadcast from Louisville General Hospital over the Smith, Kline and French equipment and received on their giant screen at the Columbia Auditorium. The broadcast periods will be for 1½ hours starting each day at 8 a. m. and 1:30 p. m.

Broadcasts will cover many fields of medicine, Dr. Noer said. Succeeding issues of the Journal will bring more information on the 1955 annual session.

State Auxiliary Cooperates In "Senior Day" Program

As a part of the Senior Day observance, the Woman's Auxiliary to the KSMA entertained with a program and tea for the wives and fiancees of senior medical students of the University of Louisville School of Medicine on Monday afternoon, April 18, at The Kentucky Hotel.

Mrs. Karl Winter, Louisville, auxiliary president, gave official greetings to those attending, followed by a brief talk on "What Membership in the Medical Auxiliary Means to a Doctor's Wife," by Mrs. Clark Bailey, Harlan.

Mrs. Earl W. Roles, Louisville, president of the Woman's Auxiliary to the Jefferson County Medical Society, extended courtesy membership to the wives of interns in Louisville, after which Wyatt Norvell, M. D., New Castle, chairman of the KSMA Committee on Rural Health, spoke. Dr. Norvell talked on, "The Advantage of Locating in Smaller Communities." A tea and social hour followed.

Officers Conference Attracts 119 at Lexington, April 7

The Fifth Annual County Society Officers' Conference, held at the Phoenix Hotel in Lexington on April 7, was, in the opinion of many veteran observers, the best meeting for the county officers yet held.

Senator Earle C. Clements, assistant Senate majority leader, was the luncheon speaker and was heard by 119 physicians and representatives of the Woman's Auxiliary. The luncheon session was presided over by the K.S.M.A. president, Clyde C. Sparks, M.D., Ashland, who moderated the morning session also. J. Gant Gaither, M.D., Hopkinsville, president-elect, presided at the afternoon session.

Another feature of the meeting, a panel entitled "How my County Society Does it," was

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moderated by George Brockman, M.D., Greenville. Other participants on the panel were: Theodore L. Adams, M.D., Lexington, W. Burr Atkinson, M.D., Campbellsville, David M. Cox, M.D., Louisville, and Mitchell B. Denham, M.D., Maysville.

Among the out-of-state speakers were Walter L. Portteus, M.D., Franklin, Indiana, president of the Indiana State Medical Association, C. Elliott Bell, M.D., Decatur, Illinois, chairman of the Macon County Public Relations Committee, Peter L. Scardino, M.D., Savannah, Georgia, chairman of the Chatham County Medical Society, and Ernest B. Howard, M.D., Chicago, assistant secretary of the A.M.A.

An exhibit, developed by the K.S.M.A. Committee on Public Relations, attracted much attention. Material used in the exhibit showed the very practical value of the new public relations manual developed for county society officers, Glenn W. Bryant, M.D., Louisville, the committee chairman said. He pointed out that the manual will be personally presented to each of the county society officers and that it will not be mailed.

Dr. Barrow to Teach At Marquette

David Woolfolk Barrow, a general surgeon in Lexington for 12 years, has been named Kurtis E. Froedtert professor of surgery at Marquette University Medical School. Dr. Barrow, a graduate of Yale University and Harvard Medical School, was formerly an instructor in surgery at Yale and was chief resident surgeon at Charity Hospital, New Orleans. He left the first part of April to assume his new duties.

Dr. Sparks to Speak at 1st District Meeting in Paducah, May 25

J. Vernon Pace, M.D., councilor for the first district, has announced plans for the annual spring meeting of the First Councilor District at the Ritz Hotel, Paducah, on Wednesday, May 25.

Clyde C. Sparks, M.D., Ashland, K.S.M.A. president, will bring the featured address. His topic will be "From Here to Where—How." J. Gant Gaither, M.D., Hopkinsville, president-elect of K.S.M.A., has also been invited to this meeting.

Merle W. Fowler, Jr., M.D., Paducah, president of the McCracken County and host society will preside. Arrangements for the session are being made by Walter R. Johnson, M.D., Paducah, secretary of the McCracken County Medical Society.

Dr. Adams Attends Atomic Test on April 26 in Nevada

Theodore L. Adams, M. D., Lexington, chairman of the KSMA Committee on Emergency Medical Service, was one of a group of 14 Kentuckians who witnessed an atomic explosion at the Atomic Energy Commission's Yucca Flats testing ground in Nevada on April 26.

Val Peterson, federal civil defense administrator, invited the group of Kentuckians, which included Maj. Gen. Jesse Lindsey, Frankfort, State civil defense co-ordinator, and Col. Thomas J. Quinn, Frankfort, co-ordinator of the State's five mobile support groups, with which Dr. Adams' committee has cooperated.

Officers Conference Pictures

(On opposite page)

(Top) Senator Earle C. Clements, lower right, and Mrs. Karl Winter, Louisville, president of the Woman's Auxiliary to K.S.M.A., posing with K.S.M.A. officers, J. Gant Gaither, M. D., Hopkinsville, president-elect; Bruce Underwood, M. D., Louisville, secretary and general manager; Clyde C. Sparks, M. D., Ashland, president, and Branham B. Baughman, M. D., Frankfort, chairman of the Council, at the Fifth Annual County Society Officers Conference, April 7, in Lexington.

(Center) Glenn Bryant, M. D., Louisville, K.S.M.A. Public Relations Committee chairman (left) shows display on the new A.M.A. Public Relations Manual to Ernest B. Howard, M. D., Chicago, assistant secretary of the A.M.A., at the County Society Officers Conference. The manual is being distributed to county society officers in person.

(Bottom) George Brockman, M. D., Greenville, (at Podium) moderated a panel at the Officers Conference entitled "How My County Society Does It," which was one of the features of the meeting. From the left are David M. Cox, M. D., Louisville; W. Burr Atkinson, M. D., Campbellsville; Mitchell Denham, M. D., Maysville; Theodore Adams, M. D., Lexington. Dr. Brockman is holding a copy of the new County Society Public Relations Manual exhibited above.

The trip was made in a Kentucky Air National Guard plane.

The Committee on Emergency Medical Service, which is set up to provide medical care in all forms of disaster, held its first meeting of the year April 6 in Lexington.

Mrs. Bushart Named "Woman of the Year" in Fulton County

KSMA Woman's Auxiliary President-elect, Mrs. Ward Bushart, Fulton, has just received special recognition as "Woman of the Year," an annual award made by the Fulton County News.

The award, made on the basis of outstanding community service, has previously been designated as the "Man of the Year" and Mrs. Bushart is the first woman to win it. She received the recognition because of her part in raising funds for the erection of a Fulton County Health Center.

Mrs. Bushart

The actual presentation was made by Governor Lawrence W. Wetherby on March 16, and came as a complete surprise to both Mrs. Bushart and her husband, R. Ward Bushart, M. D. Mrs. Karl Winter, KSMA Woman's Auxiliary president, participated in the program.

Pictures of the ceremony, planned along the lines of the network program, "This is Your Life," were shown over a Memphis TV station.

Sixth Councilor District to Meet in Bowling Green, May 26

The Sixth Councilor District will be guests of the Warren-Edmonson-Butler County Medical Society at a dinner meeting at the Helm Hotel in Bowling Green on Thursday, May 26, according to an announcement by L. O. Toomey, M.D., Bowling Green, councilor for the sixth district.

Clyde C. Sparks, M.D., Ashland, president of K.S.M.A., will speak on the subject "State Medical Associations—Their Functions and Futures." Sharing the program with Dr. Sparks will be William H. Cloyd, M.D., Glasgow, who will talk on "Modern Concepts in Treatment of Bronchietasis," and Keith M. Coverdale, M.D., Louisville, who will talk on "Electrolytic Disturbances in Children."

Frank H. Moore, M.D., Bowling Green, president of the sixth district, will preside. Harold Keen, M.D., Bowling Green, district secretary, is handling the arrangements for the meeting.

Second Councilor District to Have Dr. Sparks as Speaker, May 27

The Second Councilor District will meet at the Henderson Country Club on Friday, May 27, for a fish-fry and program, according to an announcement by Walter L. O'Nan, M.D., Henderson, Councilor for the district, who will preside.

Clyde C. Sparks, M.D., Ashland, K.S.M.A. president, will be the featured speaker of the evening. His topic will be "Changing Trends in Medical Practice." Also appearing on the program will be Rex O. McMorris, M.D., Louisville, medical director of the Rehabilitation Center, Inc., who will talk on "Medicine and Rehabilitation."

George A. Buckmaster, M.D., Henderson, secretary of the district, is assisting in the arrangements. The wives of members will be invited, said Dr. O'Nan.

Public Medical Forums in Paducah, Campbellsville, Are Completed

The public medical forums in Campbellsville and Paducah have been completed for the current season, according to reports from H. F. Chambers, M.D., Campbellsville, president of the Taylor County Medical Society, and Merle W. Fowler, Jr., M.D., president of the McCracken County society, which have sponsored the forums.

Each of these series has consisted of four meetings at which the public asked questions on selected medical subjects of a physician-panel. This was the second year for the presentation of public forums in Paducah and the first in Campbellsville. Both counties reported good response.

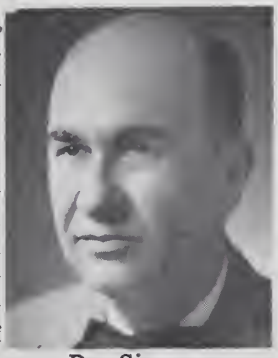
In Paducah the medical forums were co-sponsored by the Paducah Sun-Democrat, and in Campbellsville the newspaper co-sponsor was the News-Journal.

Be Sure to Register

Important decisions will be made at the August 6th Primary Elections this summer. Every member of the Kentucky State Medical Association, his family and employees are urged to vote. If you are not properly registered, be sure to do so before Monday, June 6th.

Dr. Simpson Wins 1954 Award of American Cancer Society

Gaithel L. Simpson, M.D., Greenville, was awarded the 1954 American Cancer Society medal for Kentucky in a surprise ceremony at Greenville, Wednesday evening, April 13, during the "Doctor's Day" meeting..



Dr. Simpson

J. Duffy Hancock, M.D., Louisville, past K.S.M.A. president, had just addressed the meeting on "The Cancer Problem in Kentucky" when the award was presented, according to J. Farra Van Meter, M.D., Lexington, chairman of the Board of Directors of the Kentucky Division of the Kentucky Cancer Society.

Dr. Van Meter said that the award was given Dr. Simpson because of his continuing interest in fighting cancer and for his effective work in the Muhlenberg County Hospital cancer clinic. The nomination for the award is made by the Kentucky Division Board of Directors to the American Cancer Society.

1955 Annual Doctors Day Presents First Public Health Forum

Approximately 400 women and a handful of men attended three two-hour sessions of the Public Health Forum, which was a new venture of the annual Kentucky Doctors Day program held this year at the Strand Theatre in Louisville, April 13. Written questions on health problems sent in by housewives, clubwomen, and other individuals were answered in panel discussions by 12 Louisville and out-of-town physicians.

The Woman's Auxiliary to the Jefferson County Medical Society, which co-sponsored the forum with the Louisville Times and the Louisville Courier-Journal, provided supervised baby-sitting at the Henry Clay Hotel near the Strand, so that mothers of small children might attend the sessions, according to Mrs. Earl W. Roles, president of the Auxiliary.

Many of the questions submitted concerned the role of the family doctor. These were answered in a talk entitled "Family Doctor - 1955" at the first afternoon session by W. W. Bauer, M. D., Chicago, and the panel discussion that followed his remarks. Dr. Bauer is the director of health education in the A.M.A. and the editor of Today's Health magazine.

There was wide interest in the theme of Louis Foltz, M. D., Louisville, which was "Worry—Asset or Liability?" during the morning session, and it was brought out in the discussion following that worry properly used was an asset.

The greatest number of questions submitted prior to the forum were answered in the panel following a talk by Clayton McCarty, M. D., Louisville, on "Your Future at Forty," in the final session. Questions concerning the menopause, its symptoms and effects, aroused much interest in this discussion.

Participants in the morning panel, in addition to Dr. Foltz, were: David Cox, M. D., Carrol L. Witten, M. D., Edward Frank, M. D., all of Louisville. In the first afternoon session featuring Dr. Bauer's talk the members of the panel included Sam Overstreet, M. D., and Frank Powell, M. D., both of Louisville.

In the last panel, led by Dr. McCarty, the participants were Robert Long, M. D., Oscar Miller, M. D., Rudolf Noer, M. D., E. L. Pirkey, M. D., all of Louisville, and Dr. Bauer.

U. of L. Sr. Medical Student Wins Blue Shield Essay Contest

"A Medical Student Looks at Blue Shield" is the title of the essay by Paul J. Cunningham, Princeton, Kentucky, which won first place in the Kentucky Blue Shield essay contest.

A senior in the University of Louisville School of Medicine, Cunningham will receive an expense-paid trip to the National Student A.M.A. convention in Chicago in May. His essay will also be entered in the National Blue Shield contest.

The above picture was taken following the presentation by Oscar O. Miller, M.D., to Blue Shield essay award winner, Paul J. Cunningham, in the office of J. Murray Kinsman, M.D., dean of the University of Louisville School of Medicine, who is shown on the right.

The presentation was made by Oscar O. Miller, M.D., Louisville, on March 31, in the office of Dean J. Murray Kinsman, M. D. Other award winners were: John W. Yarbro, Louisville, second place, $50.00; William P. Vonder Haar, Louisville, third place, $25.00; and William S. Tuttle, Sharpsburg, fourth place, $10.00.

Judges for the contest were Harry Andrews, M.D., representing the K.S.M.A; D. Lane Tynes, executive director of Blue Cross-Blue Shield of Kentucky, and Dean Kinsman.

Dr. Barrett Elected President of Ky. Ob-Gyn Group, April 1

Carey C. Barrett, M.D., Lexington, was elected president of the Kentucky Ob-Gyn Society at the annual meeting in Louisville, April 1, succeeding J. B. Marshall, M.D., Louisville.

The scientific program was given by residents of Louisville General Hospital. John Petry, M.D., Louisville, was presented an award for the best paper.

Following the scientific program was a business meeting and election of officers for 1955. In addition to Dr. Barrett, the following were elected: Robert Orr, M.D., Mayfield, vice-president, Robert Bateman, M.D., Danville, re-elected secretary, and Robert Monroe, M.D., Louisville, elected to the executive committee.

Plans for the time and place of the 1956 annual meeting are to be completed by the Executive Committee at the Annual Meeting of K.S.M.A. in September.

Kentucky Urologists Attend Assoc. Meet, New Orleans, March 20-24

Kentucky had a large representation at the meeting of the Southeastern Section of the American Urological Association which was held in New Orleans, La., from March 20 to 24.

On the program were L. Douglas Atherton, M.D., Louisville, who spoke on "Radical Prostatectomy" and Robert Lich, Jr., M.D., Louisville, who presented a paper on "Plastic Procedures on the Kidney," along with some studies on the etiology of Hydronephrosis. The latter was undertaken in conjunction with Joseph E. Maurer, M.D., and Malcolm L. Barnes, M.D., Department of Pathology, University of Louisville School of Medicine.

W. R. Miner, M.D., of Covington, past president of the Association, took an active part in the meeting. Other Kentuckians attending were Edward H. Ray, M.D.; Melvin R. Gilliam, M.D.; Raymond M. Slabaugh, M.D., and N. Lewis Bosworth, M.D., the committeeman from Kentucky, all of Lexington; J. Andrew Bowen, M.D., and John J. Robbins, M.D., of Louisville; H. B. Martin, M.D., Ashland, and Russell H. Davis, M.D., of Pikeville.

Districts 9, 7, 12, 15 and 4 Plan Meetings in May and June

Five councilor districts were planning meetings for the months of May and June as the May issue of the Journal went to press, according to the councilors from the several districts.

The Ninth Councilor District will meet at the Harrison Hotel in Cynthiana in a dinner session, Thursday, May 12. Wives are invited to the meeting, said J. M. Stevenson, M. D., Brooksville, councilor of the district.

The Seventh District will hold its annual dinner session at the Frankfort Country Club, Thursday, June 2. Branham B. Baughman, M. D., Frankfort, is the councilor for this district. Wives are also invited to this meeting.

Tentative plans are being made for a joint dinner meeting of the members, and their wives, of the Twelfth and Fifteenth Councilor Districts, at Du Pont Lodge, Cumberland Falls. Garnett F. Sweeney, M. D., Liberty, councilor from the Twelfth District, and Charles B. Stacy, M. D., Pineville, councilor from the Fifteenth District, made the announcement. This will be an afternoon and dinner meeting and is scheduled for June 16.

The Fourth Councilor District plans to meet

The Nominating Committee to make nominations for general officers at the 1955 Annual Meeting ate at a special table at the County Society Officers Conference luncheon. Charles Edelen, M. D., Louisville, second from the left, was named chairman. Other physicians present were Robert W. Robertson, Paducah; Charles B. Stacy, Pineville, and Coleman C. Johnston, Lexington. Richard Rust, M. D., Newport, the fifth committee member was not present.

at the Bardstown Country Club, Thursday, June 23, and wives of members are to be invited, said W. Keith Crume, M. D., Bardstown, councilor.

Advance letters will reach all members of each district before the meetings, giving the particulars, it was stated by the councilors.

Survey of State's Mental Health Needs Being Launched

Plans for a state-wide survey of Kentucky's mental health needs were launched at a meeting held March 9 in Governor Lawrence Wetherby's office in Frankfort. Daniel Blain, M.D., Washington, medical director of the American Psychiatric Association, was present.

Local health leaders who attended included John Rompf, M.D., Lexington, chairman of the Governor's Advisory Council on Mental Health, and Frank M. Gaines, Jr., M.D., State mental health commissioner.

The survey will concern itself not only with mental hospitals but also with the need for mental health clinics in Kentucky communities. Part of the study will concern financial needs. The report, when completed, may be translated by the State Mental Health Department into concrete proposals for next year's General Assembly, it was stated.

KSMA Given Exhibit Equipment

The Headquarters Office of the KSMA is the recipient of a brand new expandable aluminum display background of the easel type. The workmanship on the equipment is beautifully done and the staff of KSMA is most grateful to J. Russell Britton, division controller of the Reynolds Metals Company, and to the Reynolds Company for this valuable gift which is adaptable to various display needs of the Association.

Sou. Pediatric Seminar to Meet in N. Carolina, July 11-30

A balanced program combining the theoretical, the scientific and the practical is planned for the 35th annual session of the Southern Pediatric Seminar to be held in three one-week sessions from July 11 to July 30 at Saluda, North Carolina.

The first week (July 11-16) and the second week (July 18-23) will be devoted to pediatrics and internal medicine. The third week (July 25-30) will be given over to obstetrics and gynecology. Interested physicians may attend for one, two or three weeks.

Leaders in their respective fields compose the Seminar faculty, half of them being members of medical school faculties and the other half physicians in private practice. In making the announcement, Julian P. Price, M.D., dean of the Seminar, stressed the fact that the Seminar is for the general practitioner and is fully accredited by the American Academy of General Practice for postgraduate instruction. Further information may be obtained by writing D. L. Smith, M.D., registrar, 187 Oakland Ave., Spartansburg, S. C.

Prior to the luncheon at the County Society Officers Conference, speaker of the House and past K.S.M.A. president, Charles Vance, M. D., Lexington, got together with Walter L. Portteus, M. D., president of the Indiana State Medical Association, and C. Elliott Bell, M. D., Decatur, Illinois, county public relations chairman. Nathaniel L. Bosworth, M. D., Lexington, right, president of the Fayette County Medical Society, welcomed the conference to Lexington. Drs. Portteus and Bell were on the program.

Pres. Sparks Featured at April 14 Meeting of 13th District

KSMA President Clyde C. Sparks, M. D., Ashland, spoke on "Our Stake in Organized Medicine" at the evening session of the Thirteenth Councilor District meeting held in the Henry Clay Hotel at Ashland, April 14, according to a report from Charles B. Johnson, M. D., Russell, councilor for the district.

C. Brinley Bland, M. D., Philadelphia, assistant professor of Obstetrics and Gynecology at the Jefferson Medical School, presented a paper entitled "Heart Disease in Pregnancy" at the afternoon session.

Additional scientific papers were presented at this session by Arthur M. Schoen, M. D., associate in medicine and director of medical clinics in Louisville, who spoke on "Recent

Woman's Auxiliary to K.S.M.A. secretary and treasurer, Mrs. William C. Cloyd, Jr., Richmond, and Mrs. Karl Winter, Auxiliary president, posed with assistant secretary of A.M.A., Ernest B. Howard, M. D., before lunch at the County Society Officers Conference.

Advances in Gastro Enterology," and Hugh B. Lynn, M. D., professor of pediatric surgery at the University of Louisville School of Medicine, whose subject was "Pediatric Surgery."

In addition to Dr. Sparks' talk at the evening session, Henry A. Work, M. D., associate professor of pediatrics and psychiatry at the University of Louisville School of Medicine, spoke on "Child Behavior."

The Boyd County Medical Society acted as host to the eight-county district, with Paul Bryan, M. D., president of the local society presiding at the afternoon session. Dr. Johnson presided at the evening session.

Dr. Lull Gives House Subcommittee AMA's Views on Trainee Program

The Administration's legislation for a new trainee-reserve program (H.R.2967) drew forth the following comment on its medical aspects from George F. Lull, M.D., secretary-general manager of the AMA, as reported in the AMA Washington Letter.

Deferments from induction for military training should continue through the medical student's professional training, and classification as deferred specialists should be made at or before the age of induction, with schools making their own student selection.

Dr. Lull pointed out that medical care for trainees should be furnished by civilian contract physicians and that the ratio of physicians should not exceed that required for the civilian population. The same principle, he feels, should also hold true for the care of reserves.

His last point, expressed in a letter to Chairman Overton Brooks, of a House Armed Services Subcommittee, is that the AMA would be "unalterably opposed to the federal government furnishing medical care to veterans of the trainee program for non-service-connected conditions."

Nation's Turnout of New Doctors May Reach 7,500 by 1960

The number of physicians graduated by the medical schools of the nation is rising, according to an article in the Journal of the American Medical Association by Edward L. Turner, M. D., secretary of the A.M.A. Council on Medical Education and Hospitals.

It is estimated by Dr. Turner, who recently completed a study of a 50-year record of medical education, that by 1960 there should be a turnout of from 7,300 to 7,500 new doctors each year. This was compared to the graduation in 1900 of 3,165, and in 1954 of 6,861.

This enlarged number of medical graduates, according to Dr. Turner, will be made possible through increased student enrollment in existing schools, the opening of five completely new medical schools, and the development of three former two-year schools of basic medical science into four-year medical schools. In addition, he said, the development of new schools of medicine is being considered in several states, including Kentucky.

E. C. Strode, M. D., Lexington, chairman of the Awards Committee, met with representatives of his group during the County Society Officers Conference luncheon. Physicians Lawrence T. Minish, Louisville, and Harvey B. Stone, Hopkinsville, are shown with Dr. Strode. Two additional members of the Committee, P. A. Bryan, Ashland, and J. B. Kurre, Owensboro, were not present.

Campbell-Kenton Adopts Press Code

A proposed code to guide hospital and press relations was approved at the March 22 meeting of the Campbell-Kenton Medical Society. Highlights of the code include the point that hospital may not release information or allow pictures of patients without consent of the patient and the attending physician.

In summing up, it was stated that "it is to the best interest of the public as well as the profession that medical items, both newsworthy events as well as scientific phenonema, be reported accurately, and without bias."

Survey Evaluates Free Medical Care

The average physician contributes $3,425 worth of free medical care a year, according to a survey made by the New Hampshire Medical Society and reported in the March 17 issue of the Secretary's Letter of the AMA.

The New Hampshire physicians found in their study that the surgeon provides about a thousand dollars a month in free medical services. A New Jersey physician has estimated that the average physician gives 12% of his working hours to charity work.

Muldraugh Society Hears Variety of Topics at April 14 Meeting

A wide field of interest was covered at the all-day meeting of the Muldraugh Hill Medical Society held at the Hardin Memorial Hospital on Thursday, April 14, according to an announcement by Joseph C. Ray, M. D., Louisville, Secretary.

The morning session featured four case reports: "Appendicitis in Young Children" by Earl J. Eversole, M. D., Louisville; "The Cyanotic Infant" by C. E. Crabtree, M. D., Buffalo; "Cervical Spine Injuries" by Capt. Bertram Schneider, M. C., Fort Knox, and "An Analytical Approach to the Dynamics of an Obsessive Compulsive Case" by T. Norbert Kende, M. D., Louisville.

Following a luncheon served by the hospital, Capt. Marvin E. Pizer, D. C., Fort Knox, discussed "Some Oral Manifestations of Systemic Disease;" William H. Hagan, M. D., Louisville, "Current Status of Biliary Surgery," and 1st Lt. Bayard D. Clarkson, M. C., Fort Knox, "Treatment of Inoperable Breast Cancer."

Among the distinguished guests at the County Society Officers Conference were Cyrus Maxwell, M. D., assistant director of the Washington office of the A.M.A., and former Kentuckian William C. Bromme, M. D., Detroit, chairman of the Council of the Michigan State Medical Society, who enjoyed a joke just prior to the luncheon with Peter L. Scardino, M. D., Savannah, Georgia, who gave one of the outstanding presentations at the morning session.

CARDIAC PAIN

(Continued from page 410)

Obviously, the prolonged use of anticoagulants is no guarantee against the sclerotic closure of a coronary artery as contrasted to a thrombotic closure. Patients whose thrombotic closure has been successfully averted may eventually be expected to develop sclerotic closure, but there is reason to believe that life may be prolonged and to hope that newly developed collaterals may make sclerotic closure of little more than minor importance. In spite of the use of hospital facilities: oxygen therapy, anticoagulants, effective vasodilators, sedation and diet, the successful regulation and treatment of cardiac pain depends first on making the correct diagnosis and after that has been ascertained the establishment of rapport between the physician adn his patient. This is extremely important so that the physician may utilize all of the above methods of therapy. Certainly no single one of the previously mentioned methods of therapy is all important and life-saving. The patient's welfare depends upon the physician's ability to intergrate all of these methods as best suited for that individual patient.

Summary and Conclusion

Chest pain has usually been considered cardiac in origin if one or more of the following conditions were true: (1) it

was induced by effort, (2) its location was substernal, (3) it was constricting or oppressive in type, (4) it radiated into the left shoulder or arm, (5) it was of short duration and (6) it was relieved by nitroglycerine. Non-cardiac chest pain, on the other hand, was assumed to have the following characteristics: (1) it occurred at rest, (2) its location was in the left chest, (3) it was aching in quality, (4) it did not radiate, (5) it was of long duration and (6) it was not relieved by nitroglycerine.

According to Master, Jaffe and Bordy none of these six characteristics hitherto accepted should be used alone to differentiate between cardiac and non-cardiac chest pain. Therefore, when three or more of the characteristics of either cardiac or non-cardiac pain are present, a definite diagnosis can usually be made. The mechanisms of cardiac pain and its differential diagnosis and prevention have been discussed. Of course, what I have had to say has not been original. It was derived from many sources and I hope that the reaction will not be that of the old lady who was taken to see "Hamlet" for the first time. When asked how she liked it, she replied, "Oh, it was alright but it was too full of quotations."

Maxillofacial Surgeons Meet in May

The annual meeting of the American Society of Maxillofacial Surgeons will be at the Brown Hotel in Louisville, May 9-11, according to an announcement by John J. Wolfe, M.D., Louisville, program chairman for the meeting.

On Monday, May 9, the scientific session will be on traumatic injuries to the tissues of the face and jaws, with some aspects of their reconstruction. The Tuesday sessions, which will be held at the Veterans Hospital, will be confined to the management of malignant disease of the head and neck. All interested physicians are invited to the scientific sessions, said Dr. Wolfe.

Licking Valley Meets March 10

Approximately 35 physicians from the Eighth and Ninth Councilor Districts attended the spring meeting of the Licking Valley Medical Society at Williamstown, March 10, according to an announcement by M. J. Weber, M.D., Ludlow, secretary of the society.

A seminar on "Palliation in Advanced Malignancy" was the featured event of the program, with Paul Robinson, M.D., Covington, discussing the subject from the medical standpoint, John Floyd, Jr., M.D., Lexington, from the surgical viewpoint, and Edward Lotspeich, M.D., Cincinnati, giving the neurological aspects.

MAKING CONFIDENCE A CORNERSTONE

(Continued from page 414)

and the governing body to have at hand an accurate picture of everything, some of which are the quality of care being given, the Caesarean section rate, and the need of additional or less facilities, percentage of error in pre-operative diagnosis, percentage of unnecessary surgery, improper admissions, over-staying, overuse of ancillary facilities, etc. This is quite important since the staff certainly does not wish it to occur, and I could cite you examples where either the hospital and the staff or the patient are at fault. In many instances it is a combination of two or three. Legally, it has been held that the hospital as well as the doctor is responsible for the practices that occur within it.

Third, I urge upon you the appointment of a strong Tissue Committee and this one committee is of tremendous importance since it improves not only the quality of surgical care, but promotes much better recording of medical records and improves the confidence of the public in the ethical physicians of the staff and the hospital.

I would like to talk with you for another hour, but feel as you do that brevity is of considerable value and in this fine medical center I probably would add nothing beyond what you are already dedicated to. In closing, please let me impress upon you and if you carry nothing home with you other than this, the evening will have been well spent. Do not forget that it is much easier in organizing a new staff and opening a new hospital, to build a solid confidence with the public whereas it may be practically impossible to restore confidence and good relations with the public once they have been lost.

George Washington stated at one time in an acute situation where men were bickering over what would please one person and what would displease another, to this effect, "It is too probable that no plan we propose will be adopted. Perhaps another dreadful conflict is to be sustained. If, to please the people, we offer what we ourselves disapprove, how can we afterward defend our work? Let us raise a standard to which the wise and honest can repair; the event is in the hand of God."

Blue Cross Reaches 500,000 Mark

The 500,000th member of the Blue Cross Plan of Kentucky and the 297,000th member of the Blue Shield Plan, Mrs. Sharon Gahan, Fairdale, was enrolled in ceremonies held at the Shuler Axle Company where she is employed.

Mrs. Gahan was presented with a certificate by D. Lane Tynes, executive director of the Blue Cross-Blue Shield of Kentucky. She was then taken on a hospital tour to see Blue Cross in action, and visited the Blue Cross office in Louisville.

Mrs. Sharon Gahan, 500,000th Blue Cross member in Kentucky, is shown with James F. Bleakley, Vice President and General Manager of Shuler Axle Co., left, and D. Lane Tynes, Executive Director, Blue Cross-Blue Shield of Kentucky.

AAGP Elects Dr. Harvey Speaker

Daryl P. Harvey, M.D., Glasgow, was elected Speaker of the House of Delegates of the American Academy of General Practice at the 1955 annual meeting of the Academy in California, March 28, according to news sources.

Dr. Harvey graduated from the Tulane University School of Medicine in 1943. He is a member of the Howard Clinic in Glasgow.

Two Appointments Announced

Appointment of H. Burl Mack, M. D., Pewee Valley, President of the Kentucky Chapter of the American Academy of General Practice, as a member of the Committee on Corporate Practice of Medicine has been announced by KSMA President Clyde C. Sparks, M. D., Ashland. Chairman of the committee is Alfred O. Miller, M. D., Louisville.

John Pepper Glenn, M. D., Russellville, has been elected by the Council to fill a vacancy on the Committee on Medical Services. His term will expire in September, 1956. Gaithel L. Simpson, M. D., Greenville, is chairman of the committee.

Clos Leaves Jefferson Co. Society

Jean Clos, executive secretary of the Jefferson County Medical Society for the past two years, has resigned to accept the vice-presidency of a Louisville life insurance company, according to an announcement by Richard R. Slucher, M.D., Buechel, chairman of the society's executive committee.

"The medical society under Mr. Clos' tenure has progressed further in a program of community relations than it had in the prior two decades," Dr. Slucher said, in announcing the resignation. During Clos' term, an arbitration committee was established, an employment bureau for interviewing medical aides and personnel was set up, and a number of health forums were presented. No successor has been announced, Dr. Slucher said.

Commissioned Reserve Expanding

Support by the medical profession is being sought by the Public Health Service in its expansion and reorganization of its Commissioned Reserve for service in major national emergencies. The Service is making arrangements to train officers in the latest methods of dealing with emergency health problems, according to a recent release.

The release points out that no officer would be called to active duty without his consent unless the national emergency was so serious as to require such action. Additional information may be obtained by writing the Surgeon General, Public Health Service, U. S. Department of Health, Education, and Welfare, Washington 25, D. C.

Lack of good medical programs, especially in smaller plants, is costing American industry millions of dollars, according to a speech made by Joseph M. Bosworth, M. D., Atlanta, before the annual meeting of the Visiting Nurse Association. Dr. Bosworth said that only one plant in ten has a preventive medicine program. He said some medical problems could be solved by having visiting nurses serve in the plants part-time.

County Society Reports

BOYD

Plans were set up for cooperation with the Polio Foundation and the Health Department for immunization of first and second grade school children in Boyd County, at a called meeting of the Boyd County Medical Society, March 21.

There were 19 in attendance at the meeting, which was held at the Kings Daughters Hospital in Ashland.

C. Wayne Franz, M. D., Secretary

BOYLE

The Boyle County Medical Society held its regular monthly meeting at the Boyle County Health Center, Danville, on February 22, at 7:30 p.m. The meeting was called to order by President Stuart P. Hemphill, M. D.

Robert Kinnaird, M. D., of Lexington, was the guest speaker, presenting an informative talk on "Diseases of the Prostate," followed by a question and answer period.

George M. McClure, M. D. was named to fill the vacancy on the Boyle County Board of Health created by the death of W. H. Smith, M. D.

P. C. Sanders, M. D. discussed the criteria for the indigent heart clinic at the Louisville Children's Hospital. It was stated that appointments should be made on Wednesdays and that free care was available for children under the age of 17. A discussion of the polio vaccine program followed.

Other members and guests present were: Lloyd May, M. D., O. L. May, M. D., Robert C. Bateman, M. D., George M. McClure, M. D., John Baird, M. D., Louis J. Beto, M. D., Julian R. Hardaway, M. D., C. S. Jackson, M. D. and a guest, Millard A. Shepherd, M. D., Harrodsburg.

Chris S. Jackson, M. D., Secretary

BOYLE

The Boyle County Medical Society held its regular monthly meeting at the Boyle County Health Center, Danville, on March 22, at 7:30 p.m., with President Stuart P. Hemphill, M. D., presiding.

P. C. Sanders, M. D. distributed cards for a confidential report requested by the American Cancer Society. Dr. Sanders also called attention to the need for more funds for the Boyle County Health Department, and stressed the importance of serology tests in pregnant women. There was further discussion of the set-up for administering polio vaccine.

John Baird, M. D. spoke on "Infection in Vaginal Tract," followed by a round table discussion.

Other members present were: George M. McClure, M. D., Charles W. Caldwell, M. D., Richard G. Jackson, M. D., Julian R. Hardway, M. D., Louis J. Beto, M. D., Lloyd May, M. D., Charles W. Sisk, M. D., and George Davis, M. D.

Chris S. Jackson, M. D., Secretary

CALLOWAY

The Calloway County Medical Society held its regular meeting in the library of the Murray Hospital on March 1, Robert Hahs, M. D., vice-president, presiding.

A motion was made and carried that the local papers be asked to refrain from publishing names of physicians in news releases.

It was also moved and carried that full support be given J. A. Outland, M. D., county health officer, in the program of administering the Salk Polio Vaccine in Murray and Calloway counties.

The treasurer's report was given by Hugh Houston, M. D. Fourteen were in attendance at the meeting. Administrator Warming was a guest of the society.

H. L. Houston, M. D., Secretary

McCRACKEN

The regular meeting of the McCracken County Medical Society was held February 23, with President Merle W. Fowler, M. D. presiding.

Henry S. Gardner, M. D., Paducah, spoke on "Some Aspects of Medical Care at Atomic Installations." Dr. Gardner answered questions and showed some of the equipment used for detection of radioactivity.

Preparations being made for administration of the poliomyelitis vaccine were discussed by Sam L. Henson, M. D., Benton, director of Public Health for McCracken and Marshall Counties. It was agreed that the Society will work out a program with Dr. Henson for administration of the vaccine if there is a favorable report on the results of the vaccine trials.

Unanimous approval was given to the motion that the Society pay for the hotel and traveling expenses of all out of town speakers.

C. M. Blanton, M. D. discussed the need for physicians to carry out pre-camp examinations

(Continued on page 430)

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3. The Rotation (swivel chair) Test. *The patient sits in a swivel chair with his eyes closed and his head on a level plane. The chair is turned through ten complete revolutions in twenty seconds. Stimulation of a normal labyrinth will cause nystagmus, past pointing of the arms and subjective vertigo.*

Notes on the Diagnosis and Management of "Dizziness"

I. Vertigo

The term "dizziness" (vertigo) should be restricted to the sensation of whirling or a sense of motion.[1] This sensation is usually of organic origin and is the tangible symptom of a specific pathology.

Moderate vertigo, with a sense of motion and a whirling sensation, may be produced by infection, trauma or allergy of the external or middle ear. Examination of the ear will usually disclose the abnormality.

Severe vertigo, which will not permit the patient to stand and causes nausea and vomiting, indicates an irritation or destruction of the labyrinth. The specific condition may be labyrinthine hydrops, an acute toxic infection, hemorrhage or venospasm of the labyrinth or a fracture of the labyrinth. Multiple sclerosis and pathology of the brain stem should be considered also.

It is important to learn if the patient's sensation is continuous or paroxysmal.[2] Paroxysmal vertigo suggests specific conditions: Ménière's syndrome, cardiac disease and epilepsy. Continuous vertigo without a pattern may be due to severe anemia, posterior fossa tumor or eye muscle imbalance.

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1. Swartout, R., III, and Gunther, K.: "Dizziness:" Vertigo and Syncope, GP *8*:35 (Nov.) 1953.

2. DeWeese, D. D.: Symposium: Medical Management of Dizziness: The Importance of Accurate Diagnosis, Tr. Am. Acad. Ophth. *58*:694 (Sept.-Oct.) 1954.

SEARLE

WE ARE ONE

(Continued from page 416)

our best private hospitals.

It has been my lot since the war to serve as an area consultant for the Veterans Administration and opportunity has been afforded to visit repeatedly the regional offices and hospitals in Kentucky, Indiana, Ohio, Virginia, West Virginia and some hospitals in Pennsylvania and Michigan. Chiefs of medical services in all the larger and in some of the remote hospitals are board qualified men, often drawn from former private practice. Many of the men on service are board qualified or eligible. The resident training program in the teaching hospitals compares favorably with similar training programs in our best civilian hospitals.

Attendance upon clinical conferences in many of these smaller Veterans Administration Hospitals has been the source of valuable information and much inspiration. The Veterans medical program is far from perfect and we may not agree basically with its administration, but it is providing good medical care for veterans. The recent acquisition of William S. Middleton, M.D., long eminent in the field of Internal Medicine and Medical Education, will assure a continuation of the high standards already achieved.

Kentuckians must recall that General Edgar Erskine Hume pursued his brilliant career entirely in military medicine, the elder and young McCormacks, Philip Blackerby, M.D., and Fred W. Caudill, M. D. in Public Health, John Walker Moore, M.D., in Medical Education, and the Drs. Flexner in Research. Let us pay tribute to these and hundreds of others who serve so effectively in the less populous but no less important fields of medicine and let us always remember—WE ARE ONE.

SAM A. OVERSTREET, M.D.

The Fourth Annual Symposium for General Practitioners on Tuberculosis and other Chronic Pulmonary Diseases, approved for 26 hours of credit for members of the American Academy of General Practitioners, will be held at Saranac Lake, New York, July 11 to 15. The faculty will consist of guest lecturers as well as physicians, surgeons and scientists from Saranac Lake. Further information can be obtained from Richard P. Bellaire, M. D., General Chairman, Symposium for General Practitioners, P. O. Box 2, Saranac Lake, New York

COUNTY SOCIETY REPORTS

(Continued from page 428)

of all boy scouts in the area. It was agreed that a night be set for these examinations and that the work be done as a group.

Logan M. Weaver, M. D. was elected a Member Emeritus of the Society.

Walter R. Johnson, M. D., Secretary

HARDIN-LARUE

Edward J. Sharman, M. D., presented a paper entitled "Diaphragmatic Hernia, with Full Case Report and Correction by Surgery" at the February 10 meeting of the Hardin-LaRue County Medical Society. The paper was discussed by Louis Aaron, M. D., and Oris Aaron, M. D.

A letter was read which had been received in answer to a request for a policy on sick leave for Civil Service Personnel at Fort Knox, Kentucky.

There were 16 in attendance at the meeting, which was held in the staff room of the Hardin Memorial Hospital, Elizabethtown. The date of the next meeting was set for March 10.

William H. Barnard, M. D., Secretary

HARDIN-LARUE

Two scientific papers were presented at the Hardin-LaRue County Medical Society meeting March 10, which was held in the staff room of the Hardin Memorial Hospital, Elizabethtown.

The first essayist, Louis Aaron, M. D., Elizabethtown, presented a paper entitled "Intramedullary Fixation of Fractures." Slides were used to show x-ray films.

Richard Greathouse, M. D., Louisville, talked on the "General Care of the Premature Infant."

Fourteen were present. In addition to Dr. Greathouse, visitors at the meeting were John Bates, M. D., Leitchfield, and George Ransdell, D.D.S., Elizabethtown.

William H. Barnard, M. D., Secretary

PIKE

The Pike County Medical Society held its regular monthly meeting on February 15 in Pikeville, with 28 members in attendance. The meeting was called to order by President R. W. Allen, M. D.

During the business session Dr. Allen discussed the weight control program being sponsored by the Departments of Agriculture and

Health and the Kentucky State Medical Association. The Society gave its full approval.

William F. Clarke, M. D. made a motion that the Society secretary write the KSMA concerning health and accident insurance being carried. It was suggested that the inquiry might be made to A. B. Barrett, M. D., Lexington, chairman of the Insurance Committee.

William C. Roland, M. D. introduced Tom Yocum, M. D., Lexington, who presented a scientific program on back pain, limited mainly to Spondylolysis.

G. N. Combs, M. D., Secretary

MADISON

Porter Mayo, M. D., of Lexington, spoke on "Chest Surgery" at the March 10 meeting of the Madison County Medical Society, at the First Presbyterian Church, Richmond.

Dr. Mayo briefly outlined the incidence of carcinoma of the lung. He also pointed out that carcinoma of the chest was five times more common among smokers than non-smokers. X-ray films were used to illustrate his talk and the speaker reviewed some interesting cases.

The Madison County Medical Society will hold its next meeting April 14 and 15 at Berea College Hospital, Berea. A movie on Hypertension will be shown and discussed by E. Q. Parr, M. D., Berea.

Max E. Blue, M. D., Secretary

MASON

The Mason County Medical Society held its regular monthly meeting on March 11 in the Bus Station Dining Room, Maysville.

Business discussed included the proposed Weight Control Program for Mason County. The program was unanimously endorsed by the Society, and President Clair G. Prindle, M. D. appointed George E. Estill, M. D. to serve on the advisory committee. The Polio Vaccine Program was also discussed and sanctioned by the Society.

George E. Estill, M. D., Secretary

GREENUP

The Greenup County Medical Society held its regular monthly meeting on March 9 in Russell.

Two movies, "Obstetrics and Normal Delivery" and "Peptic Ulcer," were shown during the scientific program.

Seven members attended the meeting. The subject for the April 6 meeting will be "Trichomonas Vaginalis."

C. I. Haeberle, M. D., Secretary

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NASHVILLE :—: TENNESSEE

Robert J. Dancey, M.D., medical director of the State Tuberculosis Hospital at Madisonville since 1952, has resigned. He left in March to become head of Vermillion County Tuberculosis Hospital, Danville, Ill. Dr. Dancey, a graduate of the University of Wisconsin Medical School, was president of the Kentucky Trudeau Society.

Hugh Ray, M.D., after completing his internship and residency, has opened an office in Ashland for general practice and anesthesiology. Following his graduation from the University of Tennessee School of Medicine in 1950, Dr. Ray practiced in Cattlettsburg prior to taking special training.

George E. Cain, M.D., who has been practicing in Dant, Virginia, is returning to Kentucky to practice with **George P. Carter, M.D.,** and **Forest F. Shelby, M.D.,** in Louisa. Dr. Cain graduated from the University of Louisville School of Medicine in 1949.

Lowrie E. Jordan, Jr., M.D., following his recent discharge from the Army Medical Corps, is again associated with the Vaughn Clinic at Henderson. Dr. Jordan graduated from Northwestern University Medical School in 1944.

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Pertinent Paragraphs

To give the kind of patient care that should be given at General Hospital, there is a need for a $6,000,000 or $7,000,000 renovation and building program, according to J. Murray Kinsman, M.D., dean of the University of Louisville School of Medicine and other health officials. The original plan called for the expenditure of $3,000,000 and city voters have approved a bond issue for such a project.

Second and third floors of Bourbon County Hospital will be completely air-conditioned by summer, according to published reports. S. M. Rickman, M. D., Paris, has been appointed a member of the Hospital Air Conditioning Board which is supervising planning for the project.

The Nashville Medical Assembly which was to have been held October 27 and 28 will not be held this year due to an unforeseen change in plans, according to an announcement by Assembly officials.

The 54th Annual Meeting of the American Proctologic Society will be held at the Hotel Statler, New York City, from June 1 to June 4, it has been announced. Sessions on Wednesday, June 1, will feature lectures on basic sciences by distinguished authorities. From Thursday, June 2, to Saturday, June 4, technical papers by members and guest speakers

will be presented. The Society now has more than 550 members. All meetings are open to the medical profession.

The 1955 Annual Conference of Blue Cross and Blue Shield Plans was held at Chicago's Edgewater Beach Hotel, March 20-24. Norman A. Welch, M. D., Boston, was elected president of the Blue Shield Commission, the national coordinating agency of the 76 Blue Shield Plans in the United States, Canada, Puerto Rico, and Hawaii. Blue Shield Plans for medical-surgical care now serve more than 31 million people. Blue Cross has enrollments totalling more than 47 million.

Members of the medical profession concerned with industrial health should find helpful a "Selected Bibliography on Non-Occupational Sickness Absenteeism Among Industrial Workers" prepared by the AMA Committee on Medical Care for Industrial Workers. The bibliography, which deals with approximately 150 sources of material, is the most current listing of its kind.

The fourth edition of "Professional Films," completely revised, is now in compilation by the Academy-International of Medicine, 601 Louisiana Street, Lawrence, Kansas. New sections providing biographical data on authors and information on audio-visual activities of medical schools, dental schools, and postgraduate teaching centers will be included. AIM provides this information to the medical and dental professions without profit as a contribution toward elevating the standard of their services. Assistance may be given to the program by providing the Academy-International with the film title and full name and address of any film author.

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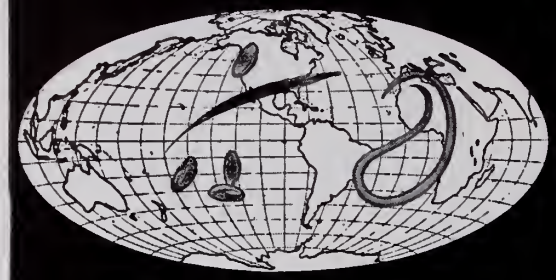

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In Memoriam

NATHANIEL A. MERCER, M. D.

Columbia

1904 - 1955

Dr. Mercer, 53, died at the Norton Memorial Infirmary in Louisville on March 28, 1955. Dr. Mercer was the head of the Mercer Clinic at Columbia.

He was a graduate of the University of Louisville School of Medicine in 1931 and took postgraduate work at Harvard. For a number of years Dr. Mercer was the health officer for Adair County.

ELISHA H. MAGGARD, M. D.

Ashland

1876 - 1955

Dr. Maggard died in a Lexington hospital, March 19, 1955, at the age of 79, after several weeks illness.

Dr. Maggard graduated from the Kentucky School of Medicine in 1901. He practiced medicine at Morehead in the early 20's, later moving to Ashland.

He had served as a surgeon at several state institutions, including Greendale, Eastern State, Lakeland, and state reformatories. He retired to Ashland in 1935.

SAMUEL BLACKBURN MARKS, M. D.

Lexington

1879 - 1955

Dr. Marks, 75, director of the Lexington-Fayette County Board of Health, died at his home in Lexington on March 12, 1955, after a short illness.

Dr. Marks was graduated from the Columbia University Medical School in 1903 and did post

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graduate work at the New York Post Graduate Hospital. He began general practice in Lexington in 1905. He later specialized in surgery and then in ear, nose and throat cases.

A past president of the Kentucky State Board of Health, Dr. Marks held membership in the American College of Surgeons, the Kentucky Eye, Ear, Nose and Throat Society, and the American Academy of Ophthalmology and Otolarnygology.

He was a captain in World War I, serving overseas as a member of the Base Hospital Unit No. 40.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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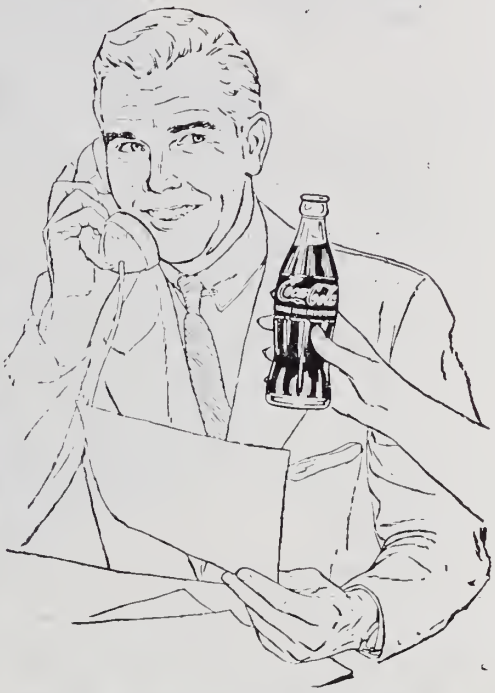

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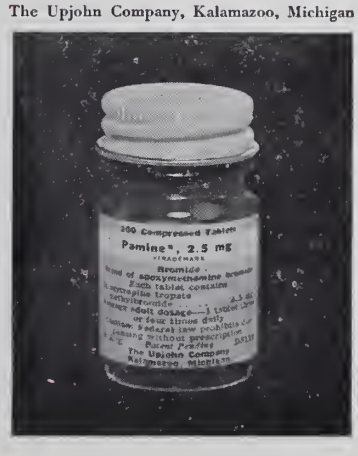

Meat...

Dietary Cholesterol and Vascular Sclerosis

Recent studies reaffirm the "hypothesis that atherosclerosis is fundamentally a metabolic disease subject to important dietary influences"[1] and do much to refute contentions that foods containing cholesterol should be avoided in general diets.

Arterial disease resembling that in human subjects was produced in Cebus monkeys fed diets high in cholesterol and low in sulfur amino acids. Within 2 to 8 weeks after initiation of the regimen serum concentration of cholesterol rose to levels of 300 to 800 mg. per 100 ml. "The hypercholesterolemia could be largely prevented by feeding 1 gram per day of dl-methionine or l-cystine as supplements to the diet." Also, the elevated cholesterol levels "could be restored to normal by feeding 1 gram of dl-methionine but only partially restored by 0.5 gram of l-cystine daily."

According to the investigators, the "vascular lesions were in the ascending aorta but extended from the valves of the left ventricle to the proximal portions of the carotid and femoral arteries . . . The aortic lesions were chiefly characterized by the presence of lipid-laden phagocytes and increase in collagen and elastic fibers. The lipids were in part cholesterol derivatives."

Cholesterol, an essential metabolite produced in intermediary metabolism,[2] is biosynthesized from dietary protein, fat, and carbohydrate.[3] Normally, its synthesis is exquisitely controlled to insure adequacy as well as to protect against an oversupply.[4] Furthermore, considerable evidence indicates that an increased cholesterol intake is not an etiologic factor in alleged aberrations of cholesterol metabolism such as atherosclerosis.

In widely variable amounts, cholesterol occurs in foods of animal origin—meat, poultry, fish and marine foods, eggs, milk products—all foods of great nutritive value.[3] Present knowledge in no way warrants alteration in the customary consumption of these foods because of their contained cholesterol.

Skeletal muscle of beef, lamb, pork, and veal provides but small amounts of cholesterol, approximately 0.06 Gm. per 100 Gm. moist weight of meat.[5] Since atherosclerosis may interfere sharply with normal nutrition, the patient should consume diets rich in protein foods (such as meat), vitamins, and fruit.[6] In addition to high quality protein, meat supplies valuable amounts of needed B vitamins and essential minerals.

1. Mann, G. V.; Andrus, S. B.; McNally, A., and Stare, F. J.: Experimental Atherosclerosis in Cebus Monkeys, J. Exper. Med. *98*:195, 1953.
2. Okey, R.: Use of Food Cholesterol in the Animal Body; Relation of Other Dietary Constituents, J. Am. Dietet. A. *30*:231 (Mar.) 1954.
3. McLester, J. S., and Darby, W. J.: Nutrition and Diet in Health and Disease, ed. 6, Philadelphia, W. B. Saunders Company, 1952, pp. 517-518.
4. Editorial: The Biosynthesis of Cholesterol, J.A.M.A. *152*:1435 (Aug. 8) 1953.
5. Okey, R.: Cholesterol Content of Food, J. Am. Dietet. A. *21*:341 (June) 1945.
6. Wright, I. S.: Arteriosclerosis, in Stieglitz, E. J.: Geriatric Medicine, Medical Care of Later Maturity, ed. 3, Philadelphia, J. B. Lippincott Company, 1954, chap. 28, p. 413.

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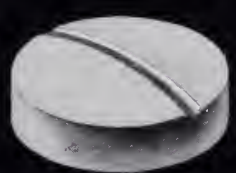

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economical for patient
Bottles of 12 and 100

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soluble penicillin to
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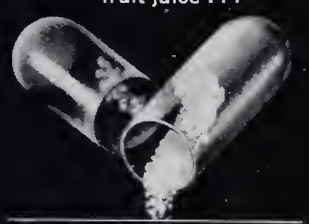

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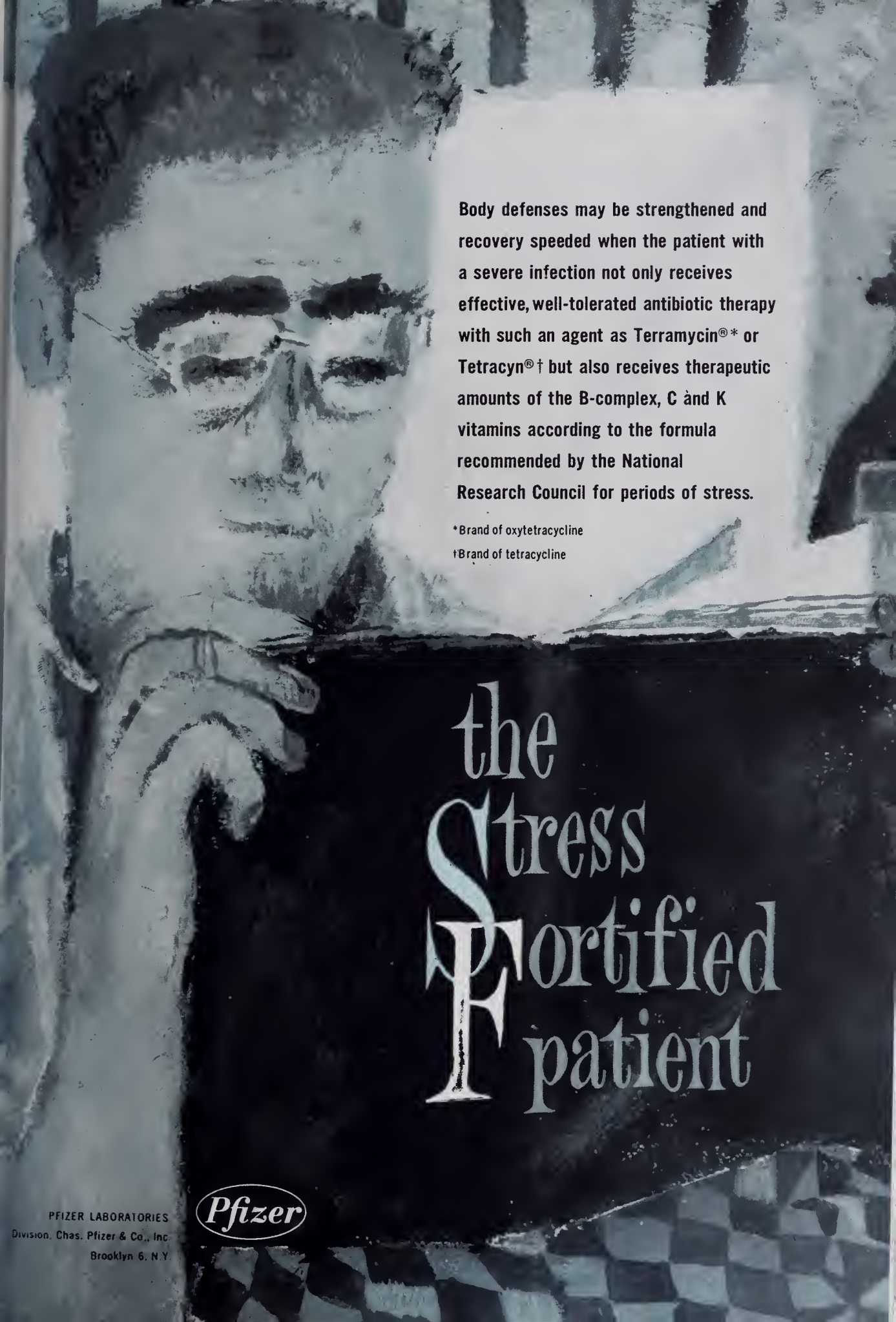
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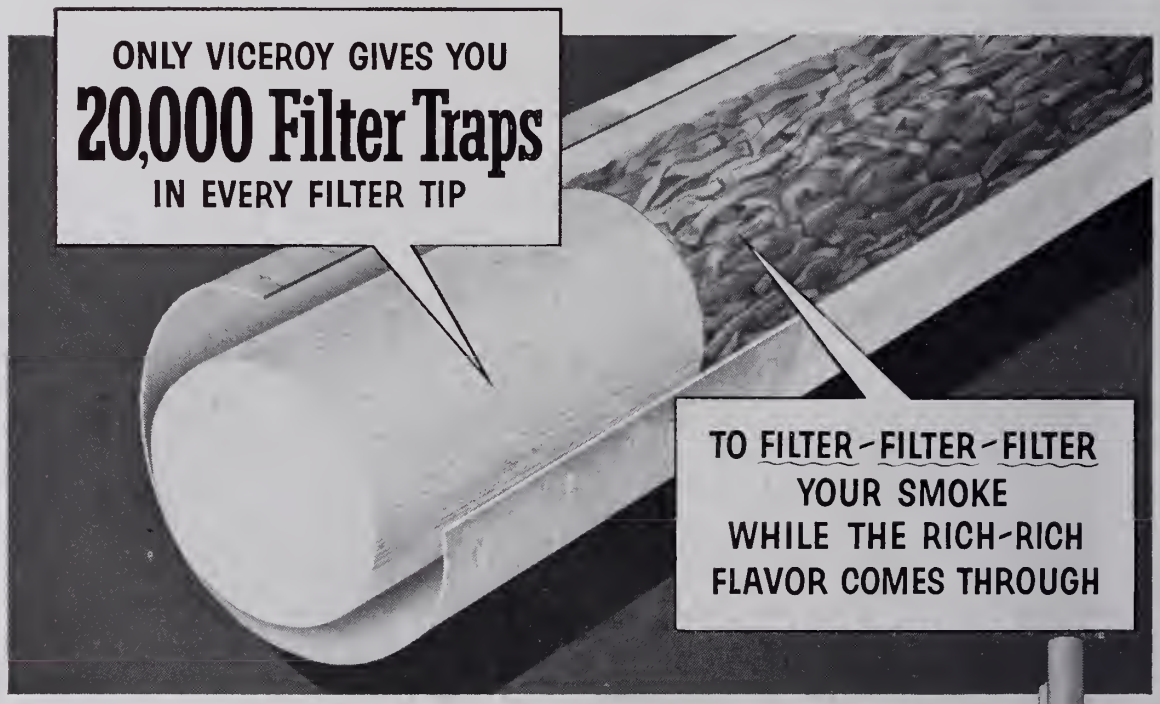

These filter traps, doctor, are composed of a pure white non-mineral cellulose acetate. They provide maximum filtering efficiency without affecting the flow of the smoke.

And, in addition, they enhance the flavor of Viceroy's quality tobaccos to such a degree that smokers report they taste even better than cigarettes without filters.

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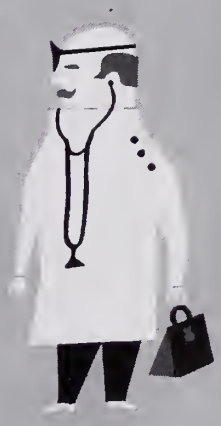

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(1) Butler, A. M., and Wolman, I. J.: Quart. Rev. Pediat. 9: 63, 1954. (2) Moore, I. H.: Journal-Lancet 74: 80, 1954. (3) Collins-Williams, C.: J. Pediat. 45: 337, 1954. (4) Clein, N. W.: Ann. Allergy 9: 195, 1951.

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VOL. 53 JUNE, 1955 NO. 6

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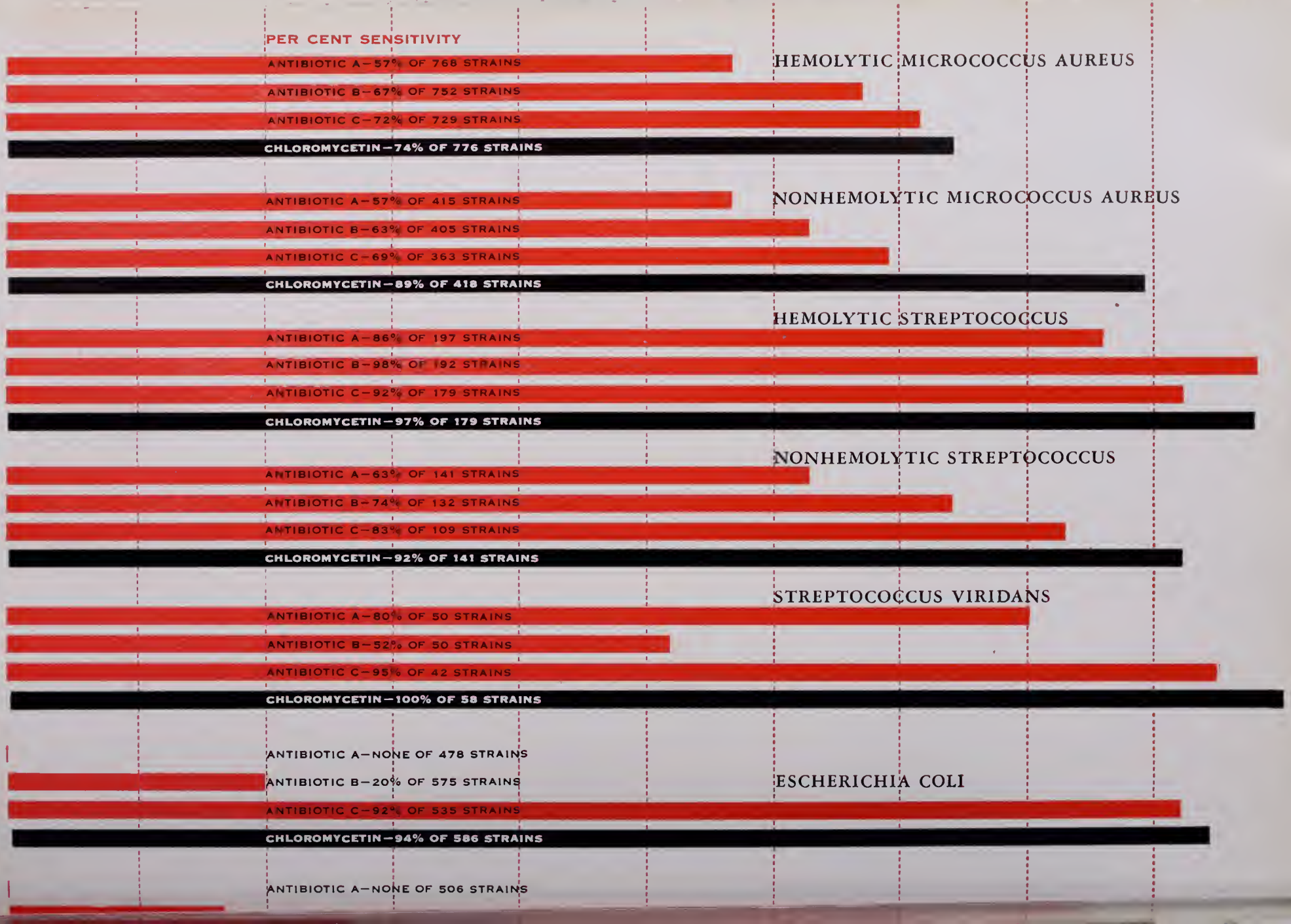
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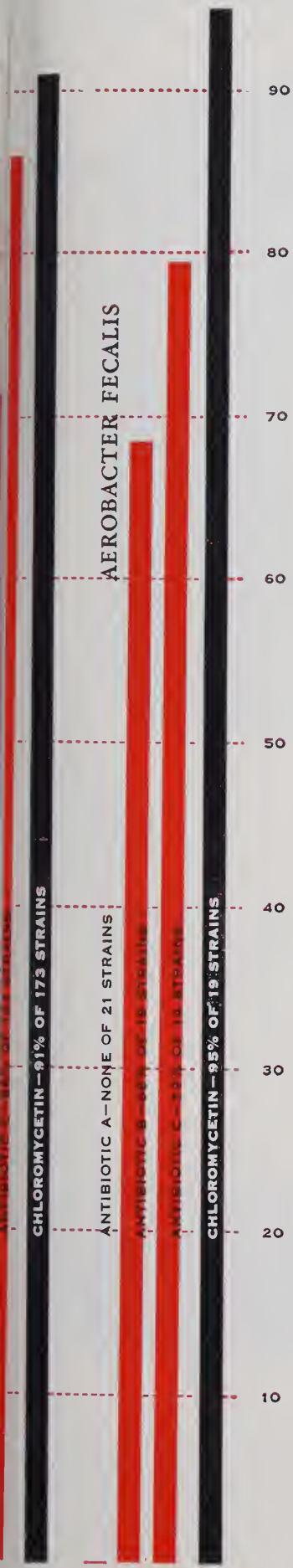

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Adapted from Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955.

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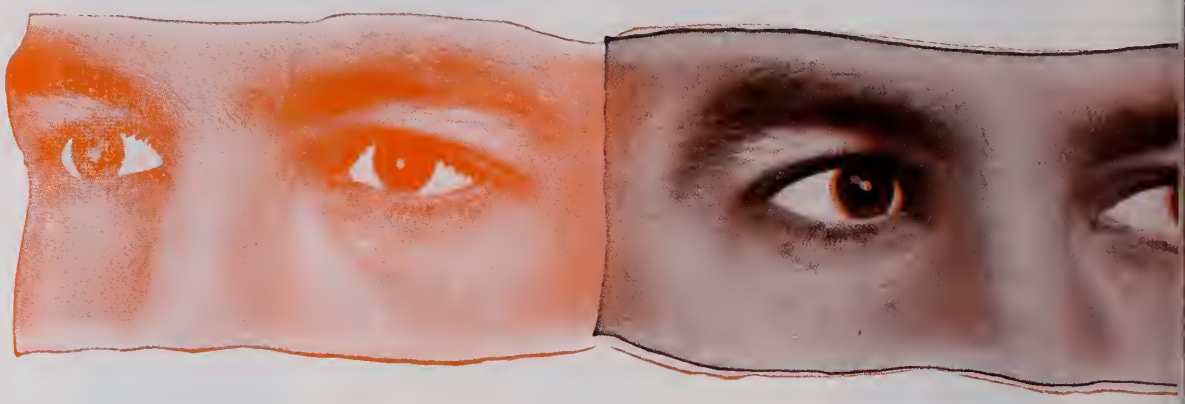

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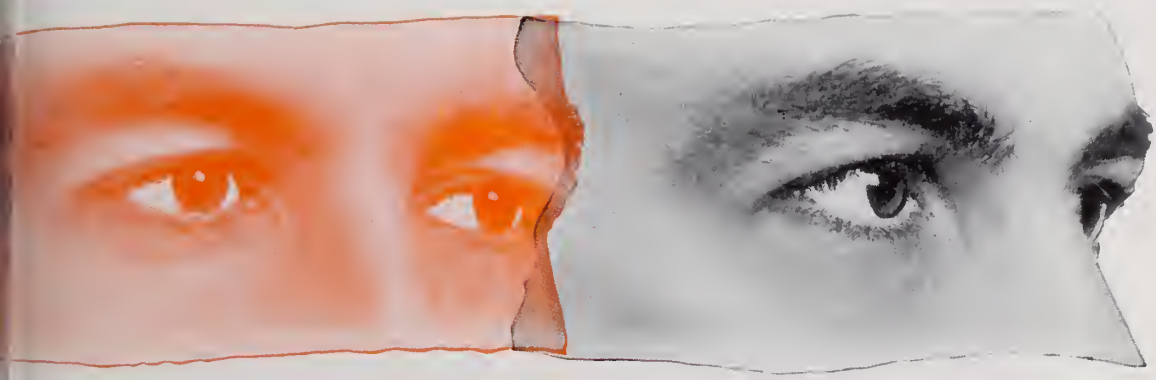

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President's Page

The problem of caring for our chronically ill has steadily grown in magnitude in the last several years. The increasing number of older people, in which group we find a higher percentage of chronically ill than in the lower age groups, has been brought about by improved medical care and the medical profession has, to a great degree, created this problem.

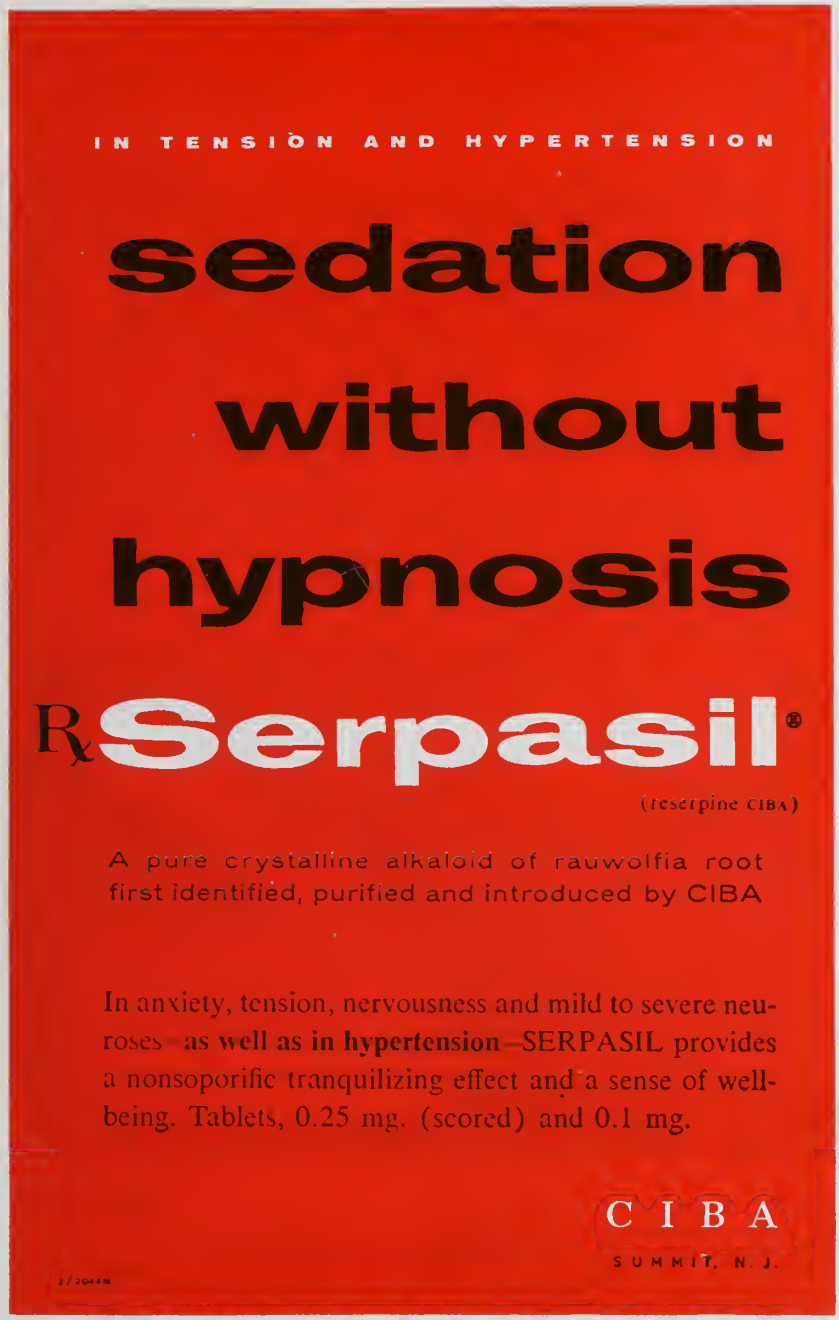
There are great numbers of displaced persons in this country—displaced to the extent that they have no relatives and not many close friends near their area of residence. If these people become chronically ill they must turn to some form of institution. Our industrial system in this country has helped create this problem.

The cost of being ill is quite great and we have come a long way in hospital construction programs but, for the most part, we have concentrated on acute general hospital beds which are expensive to construct and operate, and many chronically ill people who are not indigent cannot pay acute general hospital rates over any prolonged period of time.

Would it not seem that the medical profession, having the greatest insight into this problem, should go forward in leadership urging that this problem be solved and directing its progress?

C. C. Sparks

PRESIDENT



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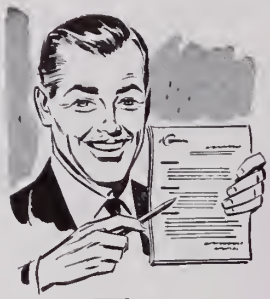

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CORONARY HEART DISEASE IN YOUNG ADULTS: by Menard M. Gertler, M. D., and Paul D. White, M. D., with the assistance of E. F. Bland, J. Fertig, S. M. Garn, J. Lerman, S. A. Levine, H. B. Sprague and N. C. Turner; The Commonwealth Fund by Harvard University Press, Cambridge, Massachusetts; 218 pages; $5.00

A group of 97 males and three females who suffered myocardial infarction at 40 years or less is studied. They must have survived for at least six months, be ambulatory, and have no hypertension, diabetes, syphilis, or other serious infection. These patients were compared with a matched-pair control group as well as a general control group. The matched-control group were selected on the basis of similarity of age, height, weight, body build, race and occupation. These three study groups were analysed and compared as regards sex, body build, morphological characteristics, heredity, total cholesterol, serum uric acid, serum total cholesterol/serum lipid phosphorus ratio, CUP index and salivary redox potential.

Although this is an interesting and stimulating report, one might feel that the group is not entirely a representative sample because the more severe cases were excluded, as selection required a survival of six months and an ambulatory status.

The authors believe it theoretically possible to select coronary-prone individuals from the population by studying people under the above listed considerations. To be found coronary-prone would constitute a very serious diagnosis and possibly at least present an unjustified one. These criteria are not easily influenced by medication or other form of therapy.

This subject is very timely for coronary disease is being found in the younger age group more and more frequently. This publication should be of interest to all physicians who treat heart disease.

Frank H. Moore, M.D.

THERAPEUTICS IN INTERNAL MEDICINE, Edited by Franklin A. Kyser, M.D., F.A.C.P. Paul B. Hoeber, Inc., New York, 1953, 830 pp

When new drugs or newly discovered faults in old drugs make some therapy of today outdated to-morrow, it must require courage to undertake a book on therapy. This second edition was published in 1953 and there is no use to look for the newest ideas in therapy, but it does cover remarkably well the accepted methods of treatment up to the time it went to press.

The book is more than a manual of drugs and dosage. Short descriptions of the disease and steps leading to diagnosis are included. There is considerable valuable discussion of the physiologic principles back of the therapeutic methods recommended. The physiology of electrolyte balance and water balance is clearly presented. Metabolic diseases, such as diabetes, are presented in a manner to show the reasons for the treatment recommended.

The list of 84 contributors is impressive and the treatment recommended seems to this reviewer sound and well founded. Less proven methods are not ignored, but are included with proper notation of the limitations or dangers involved. Drugs are identified by their technical names and by the names in common usage. Dosages are recommended, using the metric system.

The arrangement of the book is logical. Related conditions are grouped together in a manner which makes comparison of therapeutic methods easy. The indexing is good and includes listing both of diseases and of therapeutic agents.

"Therapeutics in Internal Medicine" is recommended to the physician who wants to know why he does something as well as what to do.

While obviously therapy is often a controversial subject, the physician who used this book intelligently as a guide in treatment would find himself on a sound, logical program.

Carl H. Fortune, M.D., F.A.C.P.

FRACTURES IN CHILDREN: Walter Putnam Blount, A. B., M. D., F. A. C. S.; The Williams and Wilkins Company, Baltimore, Maryland; 279 pages; $9.50

Dr. Blount's most timely and unusual book on Fractures in Children is ably edited and all phases of children's fractures are discussed. He has stated the general rules for appraising a fracture deformity and establishing a prognosis following the fracture of growing bone.

(Continued on page 466)

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IN THE BOOKS

(Continued from page 464)

This book clearly states that most fractures in children can be treated by setting, casts and conservative means; but there are several types of fractures which require open reduction for successful treatment. Open procedures are not justified for other fractures.

The book advises that physical therapy which is used frequently in adult fractures is almost never necessary in uncomplicated children's fractures. Passive manipulation does more harm than good. Any attempt to improve motions of joints, especially the elbow by loading with pails of sand does more harm than good. A child will gain his own motion through action, usage and rarely is help needed.

The chapter on the important group of elbow fractures is full of excellent guiding ideas.

This work of Dr. Blount emphasizes careful diagnosis, simplified treatment and the long range welfare of the child.

This story of fractures in children is well helped by the illustrations and drawings, and surely this volume should be a "must" in all teaching hospitals, medical libraries, as well as being a ready reference for those who treat children's fractures.

K. Armand Fischer, M.D.

BOOKS RECEIVED

"Legal Medicine" by R.B.H. Gradwohl, M.D., Sc.D., F.A.P.H.A.; The C. V. Mosby Company, St. Louis, Missouri.

"Needed Research in Health and Medical Care" by Cecil G. Shipp, M.D., M.P.H., and Eugene Taylor, M.D., M.P.H.; The University of North Carolina Press, Chapel Hill, North Carolina.

"This Pace is Not Killing Us" by J. I. Rodale; Rodale Press, Emmaus, Pennsylvania.

"Living With a Disability" by Howard A. Rusk, M.D. and Eugene Taylor in collaboration with Muriel Zimmerman, O.T.R. and Julia Judson, M.S.; The Blackiston Company, Inc., New York.

"A Textbook of Physiology" by John F. Fulton, M.D.; W. B. Saunders Company, Philadelphia.

"Reactions with Drug Therapy" by Harry L. Alexander, M.D.; W. B. Saunders Company, Philadelphia.

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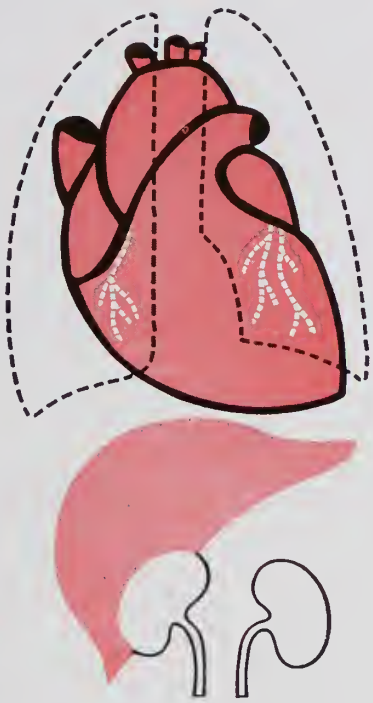

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WASHINGTON NEWS DIGEST

Washington, D. C.—For the first time in many years, there is a strong possibility that Congress will enact legislation providing federal grants to medical schools. Unlike most bills of the past, which would have given the schools money for salaries and other operating costs, the bill getting most attention now would give money only for construction and equipment.

Action first came in the Health Subcommittee of the Senate Labor and Welfare Committee. Senator Lister Hill (D., Ala.), chairman of the subcommittee as well as the committee, is the principal sponsor of the bill. Senator Hill, long interested in health legislation, was a co-sponsor of the hospital construction act that has been in operation for eight years.

Under the education bill the federal government would grant a total of $250 million to medical schools at the rate of $50 million a year for five years. No school could receive more than $3 million. New schools would receive 50% of construction and equipment costs (up to $3 million limit), but existing schools would receive only one-third, unless they agreed to increase freshman enrollment by at least 5%. If they wished, schools could set aside 20% of the federal grant into a permanent endowment fund, with earnings to be used for maintaining the building and equipment.

Nearly a score of medical school deans appeared before the Hill subcommittee to urge approval of the bill. Also supporting it were the American Medical Association and the American Dental Association, the latter on condition that dental schools also be included. There were no opposition witnesses before the Hill subcommittee.

The AMA's witnesses were Drs. F. J. L. Blasingame, a Trustee, and Walter S. Wiggins, associate secretary of the Council on Medical Education and Hospitals. Dr. Blasingame reviewed efforts of the Association since its founding to improve medical education. He cited evidence to show that medical training in this country now is the best in the world, and that the supply of physicians is increasing at a faster pace than the population.

Dr. Wiggins urged the subcommittee to make two changes. He asked that the financial inducement offered for increased enrollment be dropped, as it might cause some schools to take in more students than they could train properly, a fear that was reflected also in the testimony of some of the medical school deans. He also said the AMA recommended that the law require that six members of the Council on Medical Education be "leading medical authorities."

In the House, the Interstate and Foreign Commerce Committee, facing a heavy schedule of hearings on other bills, was slow to take up the medical education bill. But there, too, its prospects are good, particularly as the bill is sponsored by Chairman Percy Priest (D., Tenn.), whose role in medical bills compares with that of Hill in the Senate.

It appears now that Congress also is willing to go along with the Defense Department once again and extend the doctor draft act for another two years. It is scheduled to expire next June 30. The AMA opposes an extension, maintaining that a more attractive military medical career and better use of uniformed physicians would take care of the services' need for experienced specialists and administrators. The department's main argument for an extension was the need for these older men. Before reporting out the bill, however, the House Armed Services Committee made one significant change. It rewrote the bill to exempt any physicians 35 years or older who had applied for a commission at any time in the past and had been turned down solely because of physical condition.

Also moving ahead on the legislative course is a bill to continue the $100 per month equalization pay for physicians and dentists in uniform. At hearings before the House Interstate and Foreign Commerce Committee the AMA supported the special pay extension, but objected to one provision. The bill originally would have withheld the $100 from men with an obligation under the regular draft unless they agreed to serve for more than the two-year draft obligation. The House Committee eliminated this section. As the bill went to the House, it provided that all commissioned medical and dental officers receive the special pay.

Still undecided was the fate of a Defense Department's bill for medical and dental scholarships. Scholarships would cover subsistence as well as all school expenses. A student receiving aid for a year or less would have to serve on active duty for an extra year; if the scholarship were for more than a year, he would have to spend three extra years on active duty.

At this writing Congress continues to show no particular interest in reinsurance of medical insurance plans, a bill that the administration considers important. Nor have hearings been scheduled yet on the No. 2 administration bill, that providing federal guarantee for mortgages on such health facilities as hospitals and clinic.

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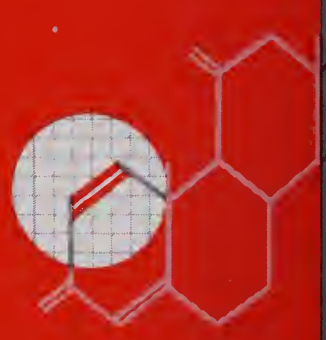

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VOL. 53 JUNE, 1955 NO. 6

The Surgical Management of Cancer of the Colon and Rectum*

COLEMAN C. JOHNSTON, M.D., F.A.C.S.
Lexington

The etiology of cancer of the large bowel, like cancer elsewhere, is not fully understood. There are, however, certain predisposing factors, namely, the malignant degeneration of the adenomatous polyp, first recognized by Hansford in 1890. The polyp constitutes the chief etiological source of cancer of the large intestine. There are true and false polyps. The former have a definite hereditary predisposition, recur as a Mendelian dominant, and will eventually undergo degeneration.

True polyps are divided into two groups, the acquired or adult type, and the congenital familial type. The former are more often solitary or relatively few in number in contrast to the congenital type, which are usually disseminated in vast numbers throughout the entire colon. The latter disease is called familial polyposis.

The so-called false or pseudo-polyp arises secondary to an inflammatory process, such as ulcerative colitis or tuberculosis and results from scarring about mucosal remnants left between areas destroyed by ulceration. The incidence of malignant change in the pseudo-polyp is reported as 11.1 per cent by Counsell, Dukes and Bacon. Lyons and Garlock reported a 36 per cent incidence of malignant degeneration in patients with ulcerative colitis of over 12 years duration, while Bargen reported multiple carcinoma of the colon in 40 patients following ulcerative colitis. Malignant lesions developing after ulcerative colitis grow rapidly, penetrate quickly, and metastasize early.

Although cancer is occasionally found in association with inflammatory changes in the bowel, such as fissures, fistulae or hemorrhoids, these lesions bear no direct relationship to the etiology of malignant disease.

Cancer of the colon is rarely found in association with diverticulitis. Rowe and Kollmar reviewed the literature to find only 63 such cases. Perforation, abscess and fistulae formation may result from carcinoma of the large bowel but represent late stages in the course of malignant invasion and degeneration.

Pathology

Cancer of the large intestine is almost always adenocarcinoma, however the squamous cell lesion is rarely seen. The adenocarcinomata may be divided grossly into: 1. Papillary carcinomata; 2. Scirrhous carcinomata; and 3. Colloid carcinomata. They originate in crypts of Lieberkuhn of the mucosa or on the polyp or polypoid lesions. The epidermoid carcinomata developing from squamous epithelium are usually confined to the anorectal area or the rare epithelial rests found in the mucosa of the large bowel. We have observed one epidermoid carcinoma of the sigmoid in an elderly colored woman, proved at biopsy, in a lesion that was inoperable. The degree of malignancy of these lesions is dependent upon cellular differentiation, and the number of mitotic figures per high powered field, as described by Broders, but in addition to this the characteristics of the lesion are dependent upon the ratio of glandular structures to fibrous tissue proliferation.

Papillary growths are composed almost entirely of glandular tissue and are characteristically the bulky, fungating, soft, friable, medullary adenocarcinomas. They grow into the lumen of the bowel, pro-

*Read before the Southeastern Surgical Congress during the 1954 Annual Meeting of the Kentucky State Medical Association, September 22, 1954.

ducing cauliflower-like lesions which have a tendency toward ulceration as they outgrow the available blood supply. Occasionally the lesion may assume such large proportions as to obstruct the lumen through sheer size. They are usually found in the right colon. The lesion in Figure I obstructed the right colon in a 45 year old white male, requiring cecostomy decompression and a three stage resection.

Fig. 1 - Papillary Carcinoma

The scirrhous carcinoma shows marked fibrous tissue proliferation with a minimum of the glandular component. Typically they infiltrate the wall to surround the bowel as an annular growth. The stenosis which develops will inevitably result in complete obstruction. Again, ulceration and infection enhance the likelihood of perforation with its sequelae. They usually arise in the left colon. The lesion in Figure 2 is an extensive scirrhous carcinoma, Grade 4, and a small papillary carcinoma, Grade 2, from a 64 year old white man, who had symptoms for a year and a half.

Fig. 2 - Scirrhous Carcinoma

A clear cut differentiation between medullary and scirrhous carcinoma is not always possible. Varying degrees of cellularity and fibrous tissue proliferation may be present in any specific growth in either the right or left colon. Instances of polypoid lesions in the left colon are not uncommon, while occasionally a scirrhous lesion may be seen in the right colon.

The mucoid carcinoma comprises approximately 5 per cent of the group. It possesses the uncontrolled function of secreting a mucinous substance. Its growth is slow and metastasis is late, although the incidence of local recurrence is notably high. The lesion in Figure 3 is a Grade I colloid carcinoma of the rectum from a 49 year old white woman, who had had a hemorrhoidectomy done about five months prior to this resection. This slow-growing tumor must have been over two years old. About 25 per cent of all patients with rectal carcinomas presenting for definitive treatment have had some former ill-advised surgery within the year.

Fig. 3 - Colloid Carcinoma

Multiple lesions are usually found in the presence of adenomatosis. The incidence in the absence of polyposis is estimated by Warren as ranging between .6 and 6 per cent. The possibility of their presence must always be borne in mind in order to avoid the embarrassment of overlooking an inconspicuous lesion, as reported by Fenger in 1888, who found at autopsy he had done a colostomy between lesions of the sigmoid and transverse colon.

Metastases from large bowel carcinoma occur relatively late in the course of the disease, as compared to cancer elsewhere. Spread may occur by direct extension, through lymphatic channels and by the blood stream. In direct extension the malignant lesion first becomes adherent to

an adjacent structure by means of a superficial inflammatory reaction. Malignant infiltration follows, involving the adjacent organ to a degree dependent upon the rate of growth and duration of the process. Radical extirpation of the adherent structures is essential and may often prove most gratifying.

Metastasis by the lymphatic system is primarily embolic. The regional lymph glands are usually the first involved; therefore a detailed knowledge of the lymphatic supply is a prerequisite for one interested in surgery of the large bowel. In two series reported by Rankin and Johnston, the incidence of glandular involvement in the right and left colon respectively was 34 and 31 per cent, and in the rectum, 45 per cent.

Although blood borne metastasis of cancer rarely precedes lymphatic spread, it presupposes malignant infiltration of the vein wall with embolic dissemination. Liver metastasis without lymphatic involvement is rare; however, the liver is involved in over one-fourth of those patients with malignant spread.

Incidence

In the United States, cancer of the large bowel kills over 20,000 persons annually. It comprises between 15 and 20 per cent of all malignant lesions and occurs in from 20 to 30 persons per 100,000. In Kentucky in 1952, 186 persons died of cancer of the large bowel. During the last half century there has been a steady increase in the incidence of the disease, however this increase is relative as well as actual. Our life span, now 69 years, has doubled during this period. In addition to this, our public as well as our profession is better educated, our diagnostic facilities have been immensely improved, and finally, our autopsy percentage has enormously increased. There are, therefore, not only many more lesions than ever before, but a far larger percentage are being discovered.

The average age of patients with carcinoma of the colon and rectum seen at the Lahey Clinic is 57 years, however it must be remembered that the lesion has been observed in the child, the adolescent and the young adult. Bonelli reported 142 cases of carcinoma of the colon in children, while Bacon found that 5.4 per cent of their patients were under 30 years of age. The lesion occurs more frequently in the male than female, in the ratio of about two to one, and is seen about eight times more often in the white than the colored race. Figure 4 shows a group of 7422 cases of cancer of the large bowel in which 51 per cent were located in the rectum, 20 per cent in the sigmoid, 9 per cent in the left, 7 per cent in the transverse, and 13 per cent in the right colon.

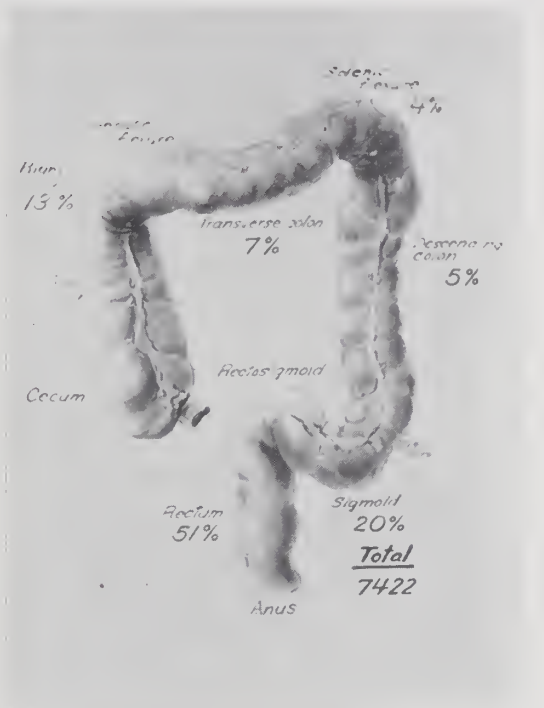

Fig. 4 - Relative Location of Cancer in Colon and Rectum.

Symptomatology

The symptoms of cancer of the large bowel are divided into two distinct categories depending upon the difference of the physiologic function of the right and left half of the bowel. The right half contains a thin, fluid stool, the liquid portion of which is absorbed. There lesions grow large, ulcerate readily and often bleed slowly. The bleeding in addition to interference with these normal physiologic functions results in a series of symptoms which manifest themselves as a clinical picture of systemic disease primarily.

In contrast to this, the left colon, sigmoid and rectum function primarily as a conduit and reservoir for the passage and storage of semi-solid and solid stool. The clinical picture of disease of this section of the bowel resolves itself about interference with the function of conducting stool on down to the rectum and out of the body. In short, obstruction of a greater or lesser degree, is the fundamental derangement caused by cancer of the left half of

the large bowel.

The symptoms of cancer of the right bowel depend therefore, on the fact that the stool content is fluid, that the diameter of the bowel is large, that the tumor of this section of the bowel tends to grow large, ulcerate readily and only rarely encircles the bowel. These features cause patients with cancer of the right colon to fall into three distinct groups:

1. The "dyspeptic group", comprising about 60 per cent, have a sense of vague persistent abdominal discomfort which usually centers in the epigastrium or right abdomen and in addition there is gaseous distension and eructation, fullness after meals and mild indigestion. Many of these patients are operated upon for gall bladder disease or so-called chronic appendicitis.

2. The anemic group, comprising about 30 per cent, suffer from weakness and anemia without visible loss of blood. Whether this anemia is due to absorption of some toxic product from the tumor or to a steady small loss of blood that is weeping from ulcerated areas of the degenerated tumor, is debatable. Any patient suffering from severe anemia must be carefully studied for cancer of the cecum as well as for the traditional carcinoma of the stomach and pernicious anemia.

3. In the third group, a remaining 10 per cent, the finding of a tumor in the right lower quadrant is the first and only evidence of the disease. It may be accidentally discovered by the patient himself or found during the course of a routine physical examination. Obstruction caused by carcinoma of the cecum and right colon occurs just rarely enough to be the exception that proves the rule.

In the left half of the colon the diameter of the bowel is smaller and the growth tends to encircle the bowel wall causing a slow progressive decrease in the size of the lumen which gradually interferes with the passage of the stool until finally there is complete obstruction. The incidence of acute large bowel obstruction due to cancer has been reported to range from 2 to 25 per cent. Becker notes the incidence of obstruction at the Lahey Clinic and Mayo Clinic as 2.0 per cent and 5.6 per cent respectively, in contrast to an incidence of 25 per cent at Charity Hospital, New Orleans, thus presenting the distinct difference between the private and charity patient. There is first apt to be blood in or on the stool, next a gradually developing constipation, often to the stage of obstruction. Alternating episodes of diarrhea and constipation may be present and are often associated with mild to moderate abdominal discomfort or colicky pain and distension of the large bowel. Pain occurs late in the progress of the disease and may be cramping in character because of the almost complete obstruction of the bowel, or if it is a dull and aching pain in the lower abdomen it is very apt to be the result of a fixation or extension of the growth. In those patients who come to operation the lesion has caused symptoms for an average of 10 to 12 months and far too often it has outgrown the bounds of operability.

Diagnosis

The diagnosis of carcinoma of the colon should be relatively easy with the diagnostic facilities which we now have at our disposal. Errors in diagnosis are chiefly the result of omission or inexperience on the part of the physician. As in disease elsewhere, the history and physical examination are of paramount importance. An adequate history which elicits the aforementioned signs and symptoms of large intestinal carcinoma may be the first evidence of pathology in the large bowel. A careful physical examination including palpation of the abdomen and rectal examination may elicit the presence of an abdominal mass, abdominal distension, local tenderness or hyper-peristalsis.

DIGITAL EXAMINATION: Approximately 60 per cent of all lesions of the colon and rectum can be felt by means of digital examination of the rectum, therefore the value of this simple procedure is quite evident. The findings on digital examination should never be taken as conclusive evidence of malignant disease for there are certain inflammatory lesions of the rectosigmoid and rectum which strongly resemble carcinoma.

PROCTOSCOPIC EXAMINATION: Direct visualization of the rectum and sigmoid colon is an invaluable aid in diagnosis since it not only reveals the characteristics of the growth, but may shed light on the operability of the lesion, as well as reveal the size of the tumor and degree of obstruction present. Biopsy through the proctoscope will establish the presence, as well as the grade of malignancy, which is of value in determining the prognosis.

ROENTGENOLOGY: Of greatest importance in the diagnosis of cancer of the colon has been the development of X-ray technique

to its present day standards. Error in diagnosis should be practically non-existent in the hands of the skilled roentgenologist.

Differential Diagnosis

The diagnosis of cancer of the colon is dependent upon the recognition of the signs and symptoms for which consultation is sought. Failure to appreciate fully the significance of these sometimes minor and inconstant symptoms on the part of both patient and physician, may result in tragic delay and allow the growth to become inoperable. The differential diagnosis of cancer of the colon must be made from diverticulitis, chronic ulcerative colitis, a single polyp or multiple polyposis, hyperplastic tuberculosis, and benign tumors.

Preoperative and Postoperative Treatment

An interest in and an understanding of large bowel physiology, pathology, and anatomy is of invaluable aid in the surgical treatment of malignant diseases of the colon and rectum. An important part of this management is the preoperative and postoperative care, for it bears a direct relationship to operability, resectability, morbidity, and mortality. In no other field of surgery is this of more importance. Many patients initially seen in a state of severe physical depletion will respond to intensive preoperative preparation sufficiently well to tolerate radical surgery. Space will not permit of a detailed discussion of this phase of the treatment.

Operative Management

With recent advances in surgery, the present-day management of carcinoma of the colon has undergone many changes. The basic principle of radical resection of the growth with a wide removal of the mesentery and all gland-bearing tissues in continuity remains the fundamental thesis upon which this progress has been and must continue to be made. Within the last 25 years resection of the large bowel in multiple stage operations in the uncomplicated case has been almost completely abandoned. The advent of chemotherapeutic and antibiotic medications, better anesthesia, and more vigorous preoperative and postoperative care, has broadened the horizon of our surgical potential to the point where wider block removal of all lymphatic drainage areas, more radical removal of the malignant lesion, and a primary anastomosis may all be performed at a single operation.

In spite of this progress, multiple stage procedures remain essential in the face of complications such as obstruction, perforation, abscess and fistula formation in addition to other rare circumstances with which we are occasionally confronted. These will be discussed subsequently under treatment of the complications of cancer of the colon and rectum. Occasionally, in the depleted patient, or following indications of impending disaster during the course of an operation, we must still recognize the potential value of stage procedures.

Technically, the surgical management of lesions of the large bowel should be divided into four distinct groups corresponding to the right half, the transverse, and the left half of the large bowel and the rectum. Having determined the operability of the lesion the procedure of choice must be selected for the particular case at hand before extirpation of the growth is begun. The choice as to whether or not radical removal of the growth may be accomplished as a single or multiple stage procedure is dependent upon the findings at exploration, the condition of the patient before and during the operation, and the presence or absence of infection, perforation or obstruction.

Surgery of the Right Colon

The surgical management of carcinoma of the right half of the colon includes a wide resection of the growth, the intervening mesentery, and all gland-bearing tissues. The blood supply of the right colon is derived ultimately from the superior mesenteric artery through its ileocolic and right colic branches. The lymphatic channels draining the area course along these vessels and therefore an adequate resection must of necessity include high ligation of the ileo-colic and right colic arteries, with excision of the corresponding bowel and mesentery.

The operation of choice in the removal of a tumor of the right colon consists of first establishing an ileo-transverse colostomy and subsequent resection of the right colon as a one-stage procedure. Occasionally the two-stage operation will be necessary and should be graded in such a manner that the ileo-colostomy is the first stage and excision of the right colon is accomplished at a second operation.

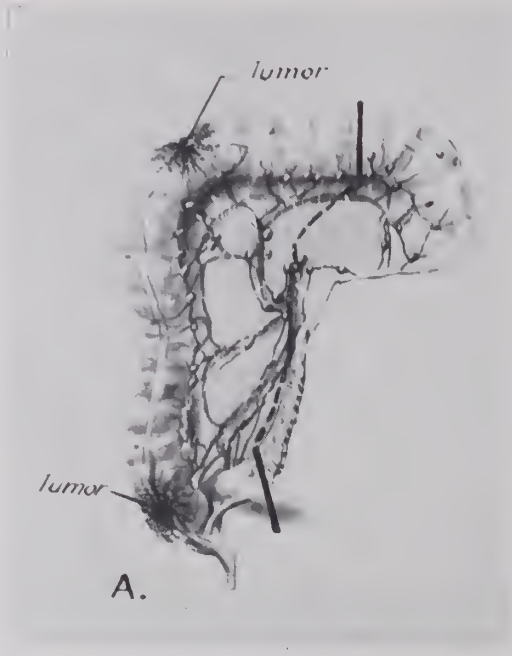

Fig. 5A - Extent of Resection for Carcinoma of the Right Colon.

Surgery of the Transverse Colon

Lesions of the transverse colon are usually readily amenable to radical resection. Fundamentally, the extirpation of lesions in the transverse colon consists of resection of the tumor with a generous margin, removing with it the adjacent mesentery and gland-bearing tissue and re-establishing continuity by means of a primary anastomosis.

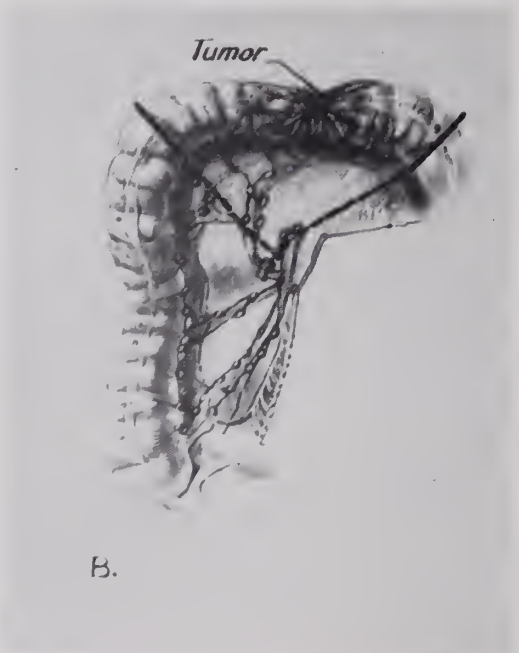

Fig. 5B - Extent of Resection for Carcinoma of the Transverse Colon.

The transverse colon derives its blood supply from one major vessel, the middle colic artery, as well as from the marginal vessels of the arcades of the right and left colic arteries. The pattern of venous and lymphatic drainage follows the middle colic artery. The proximal and distal limits of blood supply by the middle colic artery are near the hepatic and splenic flexure respectively and therefore high ligation of this artery will require the resection of the transverse colon extending well up to, but not necessarily including the hepatic and splenic flexures. All of the greater omentum should be excised close to the greater curvature of the stomach. The course of the middle colic artery is then easily identified, and it is ligated close to its origin from the superior mesenteric artery. The colon is divided near the hepatic and splenic flexures, after being assured of an adequate blood supply at the site of resection, and the intervening mesentery and colon being divided, are removed en bloc. Usually approximation of the divided ends of the bowel is not difficult when the hepatic and splenic flexures have been liberated. Should difficulty arise, the lateral peritoneal reflections of the right and left colon may be incised to give additional length to the bowel so that the anastomosis can be made without undue tension. The open anastomosis is performed by means of the same technique that has been previously described. The adjoining mesentery is closely sutured to prevent a loop of small bowel becoming entangled and eventually obstructed.

Surgery of the Left Colon

In surgery for cancer of the left colon the same general principles as previously described are again applicable. During the last few years, in an effort to broaden the scope of resection of this portion of the colon, ligation of the inferior mesentery as it emerges from its origin on the aorta at the level of the duodenum, has been advocated by Ault, Grinnell and others. This procedure has been used in the treatment of all lesions of the left colon, including the sigmoid colon and in some instances for lesions lying below the pelvic peritoneal reflection. This somewhat more radical approach would seem justified in the presence of palpable glands well up along the lymphatic drainage areas; however, with its routine use

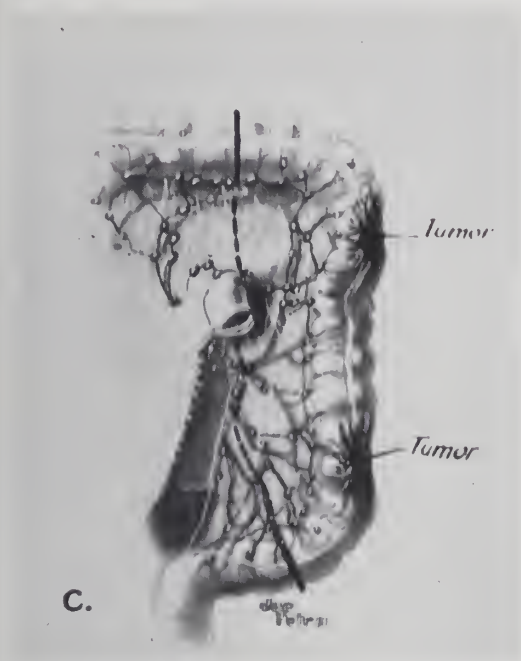

Fig. 5C - Extent of Resection for Carcinoma of Descending Colon.

in the average hands the morbidity, and possibly the mortality, might well be unduly elevated. Lesions from the region of the splenic flexure to the descending colon are adequately resected by ligation of the left colic artery as it emerges from the inferior mesenteric artery with removal of the intervening mesentery in continuity. Lesions of the sigmoid are best treated by ligation of the inferior mesenteric artery just distal to the point of origin in the left colic vessel. In all lesions of the left colon, resection and primary anastomosis should be the procedure of choice whenever possible. Often, mobilization of the proximal as well as the distal segments is necessary to allow anastomosis to be performed without tension of the suture line.

Surgery of the Rectum and Rectosigmoid

Figure 6 illustrates the pattern of lymphatic spread as it follows the superior and middle hemorrhoidal arteries toward their source. Note the glands along the levator muscles.

Miles, in the early 1900s did the pioneer work on the lymphatics of the rectum which has been repeatedly confirmed by such workers as Dukes, Gilchrist, Coller and others. He also observed that an ampullary carcinoma required about six months to invade a quarter of the circumference of the bowel in this location. Intramural spread is limited by the radially arranged lymphatic channels and is therefore slow, but once they have been traversed and the bowel wall penetrated into the fascia propria and perirectal tissues, invasion is rapid. Extramural spread then advances upward and lateralward along the superior and middle hemorrhoidal arteries and the levator ani muscles. Retrograde or downward spread of carcinoma occurs as does lateral spread only when there is complete blockage of the proximal lymphatic channel. It is reported to occur in only 2 per cent of the large accumulated series of cases studied by the above authors. Local extension may also occur with perforation following deep ulceration.

Many of the enlarged glands may be entirely inflammatory while on the other hand discontinuous or skip metastasis may also occur, so that it still remains for the surgeon to give heed to the principles of generous lymphatic extirpation. We feel that the combined abdomino-perineal resection for lesions at or below the peritoneal reflection is the safest procedure in point of minimizing local recurrence. Proximal to this a liberal anterior resection and end-to-end anastomosis has replaced the obstructive resection. The open anastomosis has proven most satisfactory. Nearly all the surgically great of the past 25 years are studiously opposed to the

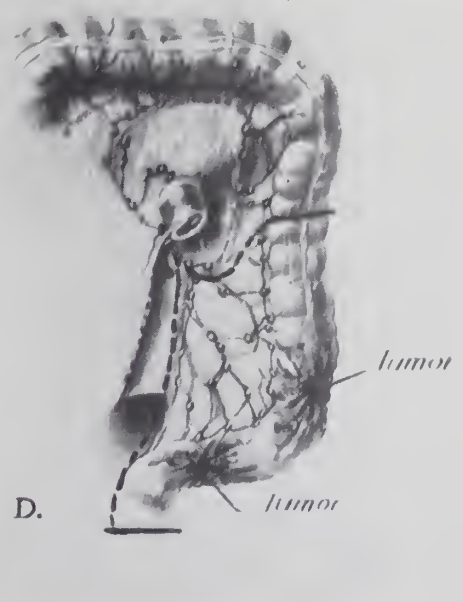

Fig. 5D - Extent of Resection for Carcinoma of Sigmoid Colon.

sphincter saving operations for rectal lesions. Bacon feels that his modified "pull through" operation permits a radical extirpation of the gland bearing tissues equal to that of the Miles operation. In a few years it will be interesting to observe the outcome of the controversy. In the meantime the incidence of perineal colostomy incontinence does not lend charm to the procedure.

Surgical Management of Carcinoma of the Large Bowel with Complications

Granted sufficient lapse of time, carcinoma of the colon will eventually develop one or more of the following complications: obstruction, perforation, or extension with malignant infiltration into adjacent viscera or parietes. Because of the seriousness of the impact of these complications upon the prognosis of the disease and because of the totally different types of treatment which are necessary for their management, these complications are to be considered as separate and distinct entities from the treatment of the uncomplicated lesion.

OBSTRUCTION: Carcinoma accounts for from 60 to 70 per cent of the obstructing lesions of the large bowel and carries a mortality of from 20 to 30 per cent. As previously mentioned, the occlusion occurs in the left half of the bowel over two-thirds of the time. Definitive treatment demands first, decompression, then resection. Decompression implies relief of gaseous distention and evacuation of stool. This may be carried out by means of intestinal intubation and repeated enemas or by colostomy. A colostomy in the transverse colon well to the left of the midline, is the procedure of choice in lesions of the descending colon. In the right half of the bowel exteriorization of the cecum or cecostomy may be necessary. The latter is a most unsatisfactory alternative. Several days to three weeks may be necessary for adequate preparation and rehabilitation prior to resection and re-establishment of continuity.

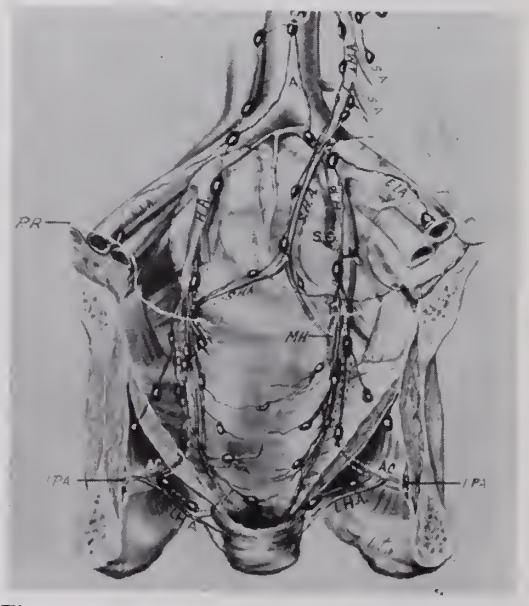

Fig. 6 - Anatomical Study of the Lymphatic Drainage Systems of the Rectum and Rectosigmoid.

In selected cases a left lower quadrant loop colostomy in the very redundant sigmoid may be used, so that at subsequent operation a wide resection of the lesion, excision of the sigmoid colostomy, and primary anastomosis may all be done at a second and final stage. In lesions completely obstructing the rectosigmoid, decompression of gas may be accomplished but one may find a large accumulation of stool extending well up into the descending colon. A combined abdominoperineal resection may be accomplished after resecting the sausage-like segment of sigmoid filled with stool. Twice we have resected a large segment of stool-filled sigmoid prior to carrying out the definitive procedure. In each case the postoperative course was uneventful and had this not been done, each patient would have had two or more operative procedures with all the attendant discomfort as well as physical and financial depletion.

PERFORATION: This is usually a late manifestation of carcinoma of the large bowel resulting in abscess or fistula formation. A colostomy preferably in the transverse colon, is done and then the abscess drained through a stab wound. As soon thereafter as the patient's general condition permits, a resection is done and finally, closure of the colostomy completes the third stage procedure.

EXTENSION: Carcinomatous extension may involve adjacent viscera or parietes and demands more radical extirpation of the involved structures. These lesions of the sigmoid may involve the bladder or female genital organs. Following careful preparation much of the bladder may be resected with the sigmoid and after primary anastomosis of the bowel, the bladder remnant may be closed about a suprapubic catheter. The uterus and adnexa may be resected with ease and often such additional procedures will prove life-saving.

Palliative Surgery

Palliative surgery in the field of incurable carcinoma of the large bowel has done much to prolong life, to relieve pain and to minimize the burdens of the relatives as well as those of the patient dying of cancer of the colon. It is generally agreed that the patient dying of distant metastases will live longer and suffer less if the primary carcinoma can be removed, since obstruction and perforation with the concomitant symptomatology will have been avoided. Grinnell reports an average survival period of twelve months for patients undergoing palliative resections as compared to 5.5 months for palliative procedures other than resection. His operative mortality was ten per cent.

A simple colostomy may be the only palliative procedure that is feasible in the presence of extensive malignant infiltration, but often the entire series of unpleasant events leading to the demise may in the eyes of the patient, the family and neighbors, be attributed to the colostomy itself. Such stigmata mistakenly attributed to the palliative colostomy will of course apply also to the colostomy of the curative procedure. It is therefore essential to clarify this misconception whenever possible so that others will not shun early surgery to avoid a colostomy. The palliative colostomy is of course, used only when it is impossible to resect and re-establish continuity or bypass the fecal stream by means of some other procedure.

At times, the lesion found inoperable at the initial exploration will, after deflecting the fecal content, decrease in size as the surrounding inflammatory reaction subsides. What at first gave the fixed or frozen immobility strongly suggestive of malignant infiltration, may completely disappear and at subsequent operation the lesion prove readily resectable. The enlarged, palpable lymph glands may be found on microscopic study to harbor no sign of malignant disease as they are entirely inflammatory in character. Bothe, of Philadelphia, has emphasized this point and reported a small series of three and five year postoperative survivals in cases of this type.

The care of the palliative colostomy, the temporary colostomy, or the permanent colostomy is actually the same. The use of the colostomy pouch or bag is to be vigorously condemned. A daily irrigation of the colostomy with tap water used until the solution returns clear will usually suffice to cleanse the bowel for a period of 24 hours. Following irrigation a small gauze pad is held in place over the colostomy by an elastic binder. After a routine has been established it is rare that leakage or soiling will occur. Every effort should be made to establish this routine as soon as possible after the operation.

Conclusions

1. The etiology, incidence, and relative frequency of location of carcinoma of the colon and rectum have been presented.

2. The pathology, symptomatology, and differential diagnosis of cancer of the right and left colon and rectum have been reviewed in relationship to the disease as a surgical problem.

3. The surgical management of carcinoma of the large bowel has been discussed from the anatomical standpoint as being divided into four distinct phases relating to; (1) the right colon, (2) the transverse colon, (3) the descending colon, and (4) the rectum.

4. The problem of the surgical management of the complicated carcinomas of the large bowel has been discussed as a separate entity because the presence of obstruction, perforation, and extension demands a judgement and technic widely at variance with the routine treatment of the uncomplicated lesion.

5. The problem of palliative surgery in advanced or inoperable malignant lesions of the large bowel has been reviewed with particular emphasis on the humanitarian aspect of minimizing the burden of those suffering from incurable carcinoma.

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Cat-Scratch Fever: Report of a Case

WALLACE E. HERRELL, M.D.*
Lexington

ALBERT BALOWS, Ph.D.**
Lexington

BENJAMIN F. ROACH, M.D.
Midway

Nonbacterial regional lymphadenitis or its more popular synonym, cat-scratch fever, is a disease entity which appears to be rapidly gaining recognition. According to Daniels and MacMurray,[5] the disease has been observed in at least 27 states and eight foreign countries. The condition first was recognized by Foshay[7] in 1932. The disease syndrome was observed in several patients who were suffering from what was theretofore a lymphadenitis of unknown etiology. In 1950 Debre and his colleagues[6] reported ten cases of the disease occurring in France. These observers were able to elicit a positive intradermal test with an antigen which had been prepared by Foshay. They therefore concluded that these cases were examples of cat-scratch disease. The following year (1951) Greer and Keefer[8] published a report of the first case of cat-scratch fever in the American literature. It was suggested in the early reports that a direct cat-contact lesion was invariable. However, Daniels and MacMurray[3,4,5] in later reports emphasized that the contact need not always be a cat scratch. According to them, the disease may become manifest following an insect bite, a rabbit scratch, or even inhalation of material contaminated with cat urine. It also may become manifest following an abrasion from a garden thorn, porcupine quill, or wooden splinter.

It has become increasingly apparent that cat-scratch fever frequently may simulate other conditions, such as tularemia, infectious mononucleosis, tuberculous adenitis, lymphogranuloma venereum, or malignant tumor, including lymphoma.[5] Recent reports indicate that cat-scratch disease may assume rather serious manifestations. For example, Cassady and Culbertson[2] reported an oculoglandular form of the disease. That the disease may manifest itself as an encephalitis was suggested by Stevens[10] and also by Thompson.[11] According to Usteri and his colleagues,[12] a mesenteric adenitis may occur. Daniels and MacMurray[5] further report that the disease may manifest itself as erythema nodosum. Belber and his colleagues[1] recently have reported a case of thrombocytopenic purpura which was thought to be associated with or possibly secondary to cat-scratch disease.

In order to distinguish cat-scratch fever from other types of regional adenopathy it is necessary to employ an intradermal test. This can readily be accomplished. The antigenic preparation usually consists of a 1 to 5 dilution of sterile pus aspirated from an involved node. The material is diluted in sterile physiologic saline solution. Daniels and MacMurray[3] have successfully employed a skin-test antigen which is obtained by macerating

*Division of Medicine, Lexington Clinic, Lexington, Kentucky.

**Division of Pathology, Lexington Clinic, Lexington, Kentucky.

necrotic lymph node and suspending it in sterile saline solution in the same dilution.

Winship[13] has described the histopathology of the involved lymph nodes. In general there appears to be no pathognomonic histologic appearance. Mollaret and his colleagues[9] have carried out investigations on the possible etiology of the disease. They have suggested that it is due to a virus which is related to the lymphogranuloma-psittacosis group.

The present report is concerned with a case of cat-scratch fever which we believe to be the first reported case of the disease in Kentucky.

Report of Case

The patient was a white female 12 years of age. She came to the clinic with a complaint of "swollen glands" of two and a half weeks' duration. The first glandular enlargement occurred in the right axilla and shortly thereafter in the right side of the neck, including the posterior cervical area. Shortly after the onset of the illness she began to have chills, fever and sweats. The temperature usually reached 101° F. daily. During the second week of the illness a large swollen gland, the size of a small hen's egg, appeared in the right epitrochlear area.

She had received two injections of penicillin, given on the third and fourth days of the illness, without any relief. She also had received 250 mg. of tetracycline every six hours for several days. The fever persisted for approximately two weeks and subsided three days before she was seen. Agglutinations for tularemia had been obtained four days before admission and were reported as negative. Likewise a heterophile antibody test had been performed and was negative.

At the time of her admission her weight was 77 pounds. Her blood pressure was 90 systolic and 70 diastolic. The pulse was 80 beats per minute. There were several large, tender glands present in the right axilla (figure 1). There also were several enlarged glands in the right postauricular area. The gland in the right epitrochlear area was approximately 4 cm. in diameter and was soft and tender. Examination of the chest, heart, abdomen and rectum was negative. There were no other significant glandular enlargements.

The x-ray of the chest was negative. The complete urinalysis was normal. The agglutination tests for Brucella were negative. The heterophile antibody test was positive, 1 to 7. The Kahn test was negative. The erythrocyte count was 4,120,000, the hemoglobin was 11.5 gm., and the leukocyte count was 9,600. The special blood smears were essentially normal. There were a moderate number of type I lymphocytes seen, but there was no evidence to suggest mononucleosis.

On questioning the child about possible contacts, it was learned that she had two cats and several kittens, and she remembered that shortly before the onset of her illness she had been scratched around the face and neck by these animals.

A provisional diagnosis of cat-scratch fever was made. The patient was admitted to the hospital for the purpose of incision and drainage of one of the lymph nodes in the axilla in order to obtain material for bacteriologic study. A moderate amount of purulent material was obtained from the suppurative adenitis. Gram's stains and routine cultures were negative. In addition, acid-fast stains and cultures for acid-fast bacilli, as well as cultures for Brucella, were all negative. An antigen was prepared in the Department of Bacteriology for the purpose of skin testing. Approximately a week or ten days after she was dismissed from the hospital skin tests were performed using the flexor surface of the forearm. A strongly positive skin reaction was obtained using the antigen prepared from the material obtained from this patient. A strongly positive reaction was obtained also using an antigen which was kindly supplied by Dr. Lee Foshay. Both the antigen prepared from this patient and the Foshay antigen yielded negative intradermal tests on two laboratory workers.

Shortly after the patient's dismissal from the hospital the lesion in the region of the right elbow ruptured spontaneously and drained a moderate amount of purulent material, and the lesion subsequently

Fig. 1. Adenopathy, right axilla, in patient with cat-scratch fever.

healed completely. The patient made an uneventful recovery.

Summary

A case of cat-scratch fever has been reported. It is thought to be the first reported case of this disease in Kentucky. It seems reasonable to assume that cat-scratch fever may occur more frequently than is generally recognized.

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The Interpretation of Minimal Laboratory Procedures*

A. J. MILLER, M.D.**

Louisville

It is a distinguished honor for one who is interested in laboratory work to be asked to speak about the interpretation of minimal laboratory procedures. There might be a selfish inclination to regard a maximum number as the minimum. It is a rare compliment for one to be suspected of knowing the limitations of his own art.

The development and use of laboratory procedures has grown by leaps and bounds in recent years. One needs only to compare a slight book of about 200 pages, a standard laboratory manual of 30 years ago, with a present day work of three colossal volumes and thousands of pages to appreciate this phenomenal growth.

It is not uncommon to hear the merits of laboratory procedures argued. One contends, "We should make diagnoses, determine the abatement or progress of disease by listening, seeing, feeling and thinking. Therein lies the science and the art of medical practice." The other opines, "Laboratory procedures are scientific, they designate dysfunction and progress of disease and the return to normal." Usually the former speaker has more gray hair, more experience, and a busy practice has prevented an introduction to the new laboratory tests as they were developed during his lifetime. The latter person has been so busy with test tubes and graphs and indicators that his eyes, ears, and fingers are not educated; he has no time to think.

I suspect that this assignment has emerged from such contentions, and asks the question, "Can we succeed with a few laboratory procedures?" Suppose we consider briefly a few laboratory tests from the standpoint of accuracy, need, and information gained by use of the procedures.

Blood

Blood cell counts have been used rather extensively, and somewhat indiscriminately, for many years. It seems there has been a certain magic in the actual counting of such tiny objects, but the information gained is quite limited and seldom questioned. The information gained consists of the number of cells per unit volume of blood; that is all. Too often such conditions as blood volume, quantity of hemoglobin, and quantity of leukocytes are falsely read into the total blood count.

Recent statistical studies indicate that blood counts are not accurate, that errors of ten per cent, plus or minus, are to be expected, and these are not attributed to careless work.

The hematocrit tube is a good substitute for the counting chamber. Its accuracy compares favorably and more information

*Read before the Kentucky State Medical Association's Annual Meeting, September 21, 1954, Columbia Auditorium, Louisville.

**Professor of Pathology, University of Louisville School of Medicine.

is gained, such as the volume of platelets, volume of leukocytes, volume of erythrocytes and sedimentation rate.

There is no substitute or short cut for the differential blood count. It should indicate, on a percentage basis, the number and type of leukocytes, degenerated forms, abnormal cells, size and shape of erythrocytes, young cells, staining reactions and an estimate of hemoglobin. Due to the press of routine work, excessive work volume and inattention, differential counts are commonly not well done. A "high dry" differential count is perhaps a lesser blow to the conscience but has no more value than a sink test. There are laboratories in which such cells as eosinophiles, monocytes and basophiles are not seen.

Urine

Urinalysis is often faulty for two reasons; one - delayed examination which allows bacteria to change the reaction and destroy formed elements, and two - careless collection and bottling of the specimen. Foreign material in the container can do much damage, and there may even be a sample from the patient who used the container previously.

The time tested list of gross appearance, specific gravity, acidity, albumin, sugar, acetone bodies, and formed elements in the sediment should not be reduced. If water is withheld from the patient for six or eight hours before the sample is taken, the specific gravity of the first sample will indicate the ability of the kidney to concentrate urine. As a rule, small amounts of protein result from inflammatory reaction in the urinary tract distal to the kidney and large amounts of protein mean tubule damage, chiefly nephrosis. But in the early stage of chronic nephritis albumin may be slight and even intermittent. A single report of a trace of albumin is valueless.

Serious consideration of urine sediment seems to have gone almost to oblivion, probably for the same reason that certain leukocytes have vanished. Many formed elements in the sediment will disappear in a few hours. The number and character of casts is a dependable index to the type of kidney damage and the rapidity with which it is progressing. Small amounts of blood in the urine should be confirmed by chemical examination since yeast cells and other contaminants may resemble red cells. Erythrocytes in casts are excellent evidence of renal hemorrhage. There is a common concept that all renal tumors bleed into the urinary tract but this is wrong. Bleeding will occur, whether the tumor is benign or malignant, if tumor tissue is exposed in the urinary tract, otherwise the extravasated blood infiltrates the tumor only.

Gastric Content

In regard to stomach content, only a few points will be emphasized. One is that massive hemorrhage does occur from peptic ulcers and both benign and malignant tumors. Curiously, some benign tumors bleed more profusely than malignant ones, which, as a rule, bleed slowly. Also, exsanguination may result from capillary hemorrhage of the gastro-intestinal mucosa. Such bleeding may occur during the course of liver disease, cardiac decompensation, chronic nephritis and infections, especially those in which gram negative organisms are concerned.

The most useful points in regard to gastric secretion are the presence and quantity of hydrochloric acid, the total acidity, and the presence of enzymes. Hypochlorhydria usually means obstruction of the stomach or atrophy of the mucosa in the course of chronic gastritis. Determinations of combined hydrochloric acid are probably so inaccurate they are valueless.

Liver Function

The liver has many functions, and most of these cannot be specifically tested. Impediment to bile flow may be shown by the urinary urobilinogen, the fecal urobilinogen, serum alkaline phosphatase and serum cholesterol. Values are not too dependable since there are numerous degrees of impediment to bile flow and many factors influence it. Also, it is probably true, as some contend, that interference with bile flow results in liver damage.

Liver cell damage may be manifested by the albumin globulin ratio, cephalin cholesterol flocculation, urinary urobilinogen, glucose tolerance, plasma, vitamin A, and many others. The degree of accuracy is not high possibly because the various functions of the liver are interrelated and also not confined entirely to the liver.

Cytology

In recent years there has been a wave of effort to recognize individual cancer cells. To this end the privacy of every body orifice has been violated and even its bathwater has been scrutinized. A certain amount of success is gained but errors are very high, except by the most expert, and

they often have troubles. It should be emphasized that Dr. G. N. Papanicolaou, who has had more years of experience in cytology than any other individual in this country, insists that the cytology findings be confirmed by biopsy.

Needle Biopsy

The use of the needle biopsy is gradually advancing. It is used, not only in tumor detection but to determine tissue changes and specific reactions. Many parts of the body have been needled for the purpose of diagnosis. The liver, bone marrow, breast lesions, subcutaneous masses, kidney, and other regions have been successfully needled. The percentage of error is higher than in excision biopsies, partly because the sample may be not representative and also because the sample is small. This procedure is not very difficult but does require training and practice.

Frozen Sections

Use of frozen sections is commonly abused. The accuracy of diagnosis is sufficient to make the procedure useful, but there are limitations to its dependability. One of the faults is that this is a rush diagnosis, and rushes are often disastrous. Another deterrent is the getting of a representative sample, since approach is limited. Another difficulty is that certain tissues do not make satisfactory frozen section preparations. Among these are lymph nodes, brain and mucous membranes. When in doubt about the frozen section diagnosis, opinion should be held in abeyance for further and deliberate study.

Summary

It is not possible to mention the number of laboratory procedures available. It is estimated to be thousands, but no one has an accurate count. If we consider them individually, it seems that most of them are of some value but many cannot be substituted and are valuable for specific information. It seems impossible, therefore, to recite a short list of laboratory procedures and say, "If you will use these, you shall succeed." Also, the number of tests is so great that the aimless use of them with the hope that one will be valuable is about as sensible as a man shooting at his house because he knows there is a rat in there somewhere.

Little can be said for the recommended list of laboratory tests or the "routine" group. They tend to dull the perception of the technician by laboring unceasingly at tasks he knows are "just routine." But it does help fill the coffers of the hospital treasurer. As such, it is a racket. There is no lower form of racketeering than that applied to the sick and afflicted.

The pathologist has been defined as a practitioner and a physician. He does not write prescriptions nor perform operations but he is a consultant for two reasons. First, his work may, and often does, lead to or confirm the correct diagnosis, so that the proper prescription may be written or the correct surgical procedure instituted. He is a human being, hence not infallible; and his work can be misinterpreted. Second, laboratory procedures are his chief interest and he is, therefore, better qualified. Very few laboratory procedures are pathognomonic; they all must be evaluated with the clinical story and the physical examination. The interpretation of laboratory data and the choice of laboratory procedures most applicable to the situation should be determined by consultation.

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Diagnosis and Treatment of Aural Vertigo*

ARTHUR L. JUERS, M. D.**
GEORGE I. UHDE, M. D.**
Louisville

The purpose of this paper is to present findings in patients with vertigo of aural or peripheral origin. The term vertigo, derived from a Latin word meaning to turn, is preferred to dizziness. However, because of common usage, most physicians now accept vertigo and dizziness as being synonymous.

In most instances of vertigo of aural origin there are symptoms and findings indicating disturbance of cochlear function as well as vestibular. A carefully taken history establishing chronology of symptoms frequently is a major step in making a diagnosis. A complete ear, nose and throat examination including the nasopharynx is a must. An audiogram (air and bone conduction) should be done routinely in every case. Additional auditory tests should be done when indicated, to establish the presence or absence of recruitment, word discrimination capacity, dynamic range of intensity tolerance for speech, etc. Caloric tests for vestibular function should be done in all cases of asymmetrical nerve deafness.

Vertigo of peripheral origin gives the patient an illusion of turning and, if severe, is accompanied by nystagmus, nausea and vomiting. The dizziness frequently mentioned by patients in whom the origin is other than in the immediate vestibular system or cerebellum, usually does not have an actual feeling of turning, and true nystagmus with a slow and fast component is not found.

Cerumen impacted against the tympanic membrane may occasionally produce vertigo. Removal of the cerumen promptly provides relief.

Obstruction of the Eustachian tube is sometimes accompanied by vertigo. The patient has, in addition, a feeling of the ear being blocked. In many of these cases serous fluid collects in the middle ear. Tubal inflation and removal of the middle ear fluid is the immediate treatment. The underlying cause of the tubal obstruction must be determined and corrected. In rare instances there may be slight vertigo in early suppurative otitis media. If vertigo begins after several days duration of the suppurative process, the possibility of a true labyrinthitis or dural penetration is suggested and early surgical intervention should be considered.

The development of vertigo in a patient with chronic attic or middle ear disease almost invariably is indicative of extension of pathology into the labyrinth. This may be merely a perilabyrinthitis or there may be actually an erosion of the bony wall of one of the semicircular canals. A cholesteatoma in the attic-antral area frequently erodes the bony labyrinthine wall and a fistula results. The presence of a labyrinthine fistula in these cases can be determined by reproducing the vertigo by means of pressure in the external meatus either with a finger or by air pressure from a snugly fitting rubber bulb. If a suppurative labyrinthitis develops, the labyrinth loses its function and no response to pressure will be obtained. All cases with labyrinthine disturbance secondary to chronic ear disease should be treated surgically.

Vertigo originating in the inner ear is somewhat more of a problem both from the standpoint of determining a specific etiology and successful treatment. Exact knowledge of the pathology in this complex area is somewhat limited because of early postmortem lytic changes in vestibular and cochlear end-organ structures within hours after death. It is frequently impossible to distinguish between premortem pathology and postmortem disintegration. However, in spite of this difficulty it has been possible for clinicians to correlate limited pathological with extensive clinical observations and arrive at a satisfactory working basis for managing vertigo of end-organ origin.

Perhaps the most common basis of vertigo seen by the general practitioner and internist is that which would be included under the toxic group. The specific etiology could be drugs, viral, bacterial, focal infection, etc. The exact area of attack is a matter of speculation. There may be tinnitus and neural deafness indicating cochlear involvement as well. Those associated with acute general infectious processes

*This is a condensation of a presentation given before the Norton Infirmary Staff Meeting, Louisville, Kentucky.

**From Department of Otolaryngology, University of Louisville, Medical School.

are usually self-limited and require only symptomatic treatment such as sedation and Dramamine. Any suspected drug should be withdrawn. If symptoms do not subside in a week or two, a more detailed study should be made.

Another fairly common group is the one with vascular changes. This is, of course, more likely to occur in older individuals. Histological studies have revealed angiosclerotic changes which may be general in the end organ circulation or may be limited to circumscribed areas. Small doses of nicotinic acid may help some of these patients. If the dose exceeds the patient's tolerance, symptoms may be aggravated instead of relieved.

The most definitely defined group of patients with vertigo due to inner ear pathology is the one of Meniere's syndrome. Histological studies of the inner ear on several patients known to have this type of vertigo have revealed consistent distention of the endolymphatic duct and consequently the descriptive term of labyrinthine hydrops is frequently used. The term Meniere's syndrome or disease has been rather loosely used and as a result there is some confusion as to its meaning. Strictly speaking, it should be limited to those cases of paroxysmal vertigo accompanied by tinnitus (usually low-pitched) and nerve deafness (usually greater for the lower frequencies). The caloric test between attacks shows normal or a slightly hypoactive response. A severe acute episode is frequently accompanied by nausea and vomiting.

There is no one specific etiology for labyrinthine hydrops. It has been stated that, "Meniere's syndrome is not a disease but a typical reaction of a predisposed labyrinth to an almost infinite series of exogenous and endogenous influences which, however, have this in common, that they express themselves through increased local capillary permeability." The most commonly accepted concept is that as a result of any one or a combination of several factors mediated through the autonomic and/or endocrine system, arteriolar spasm in the stria produces sufficient interference with the capillary nutrition to cause an increase in permeability. The final result is undoubtedly the formation of an excessive amount and electrolytically altered endolymph. It is because of this multiplicity of etiology that medical treatment is not infrequently ineffective. Psychic or emotional stress is probably important as part of the etiology in many cases.

In approximately five to 10 percent of the cases, allergy may play an important role. In these instances there is usually evidence of nasal allergy on history or otolaryngological examination. Very rarely is there a dental or suppurative sinus focus of infection. The nasopharynx should be thoroughly inspected for an infected cyst or lymphoid tissue infection.

Recent microchemical studies on animals have shown that the sodium-potassium ratio in the endolymph resembles that found in intracellular fluid, i.e., high potassium and low sodium. The perilymph, on the other hand, resembles extracellular fluid and contains a high sodium and low potassium ratio. Studies on endolymph in Meniere's syndrome have not been made, but it is quite possible that a change in electrolyte content is present. Most medical treatment at present is directed toward this possibility.

Sedation and Dramamine help alleviate the acute attack. Recently, Benadryl given slowly intravenously has been reported to give prompt relief of the acute symptoms. Intravenous histamine is still used by some, although there is less enthusiasm for its use than there was several years ago. Others feel that nicotinic acid is equally effective.

The basis of most long-range treatment for Meniere's consists of a low sodium diet, nicotinic acid and either ammonium chloride or potassium chloride by mouth. Allergy investigation should be considered when indicated on the basis of the history and nasal examination. Elimination of smoking and moderation in the use of coffee is important in some instances. The possible relation of stress beyond the patient's tolerance must be considered. The addition of Banthine to other medical treatment is helpful in such cases.

The majority of cases with Meniere's syndrome can be controlled by medical measures. However, it is not unusual for symptoms to recur if the patient neglects his regime. A respiratory or virus infection may precipitate a return of symptoms. The latter condition may alter the capillary permeability of the stria sufficiently to permit the development of hydrops again.

Partial section of the eighth cranial nerve or destruction of the labyrinth is done only on those cases which are incapacitated in spite of an adequate period of medical treatment. Candidates for sur-

gical relief usually have relatively little useful hearing in the involved ear. Cases with bilateral involvement which are refractory to medical treatment pose special problems which will not be considered here.

Postural vertigo is that which is brought on only when the head is placed in or moves in a certain plane. It is almost invariably of vestibular origin. It is seen fairly often in Meniere's syndrome. Postural vertigo is not pathognomonic of any etiological or clinical group. Some cases of head injury experience this type of vertigo. Undoubtedly there is in these cases some concussion involving a small portion of the vestibular end organ.

Vertigo is usually not an early symptom of tumors involving the eighth cranial nerve. Unilateral nerve deafness with tinnitus is the earliest symptom. Vestibular function is lost early but since this loss is very slow, compensation takes place simultaneously and the patient is not aware of any vertigo. A decrease of, or complete loss of the vestibular response to the caloric test takes place early. Loss of corneal sensitivity may be an early finding. This is believed to be due to pressure of the lesion on the sensory nucleus and tract of the trigeminal into the medulla. Vertigo begins when the lesion is large enough to press against the central vestibular and cerebellar pathways. X-ray studies of the internal acoustic meati should be made when an eighth nerve tumor is suspected. In addition to the usual audiometric test for auditory function, tests for recruitment and speech discrimination are sometimes of value in establishing a diagnosis.

The dizziness complained of by the patient with functional or psychoneurotic disturbances is usually not of the turning type. An impression of the functional nature of the symptoms is soon apparent on taking the history. The absence of associated cochlear symptoms is significant. However, the examiner must always keep in mind that the patient with a multiplicity of functional complaints may also have organic disease. A well taken history and an adequate examination to rule out all organic possibilities is usually not difficult. Excessive subjective response to a caloric test is frequently present in the patient with functional dizziness.

Summary

A history of cochlear symptoms being associated with vertigo is good evidence of aural or peripheral origin. A systematic examination will elicit any meatal or middle ear lesions. A thorough assessment of inner ear function should include adequate hearing tests in all cases and caloric testing for vestibular function in all cases with asymmetrical neural deafness. The absence of cochlear symptoms or findings does not rule out the peripheral origin of vertigo.

Socialized Dentistry and Its Relation to Children*

RAYMOND E. MYERS, D.D.S., B.S.

Louisville

As a representative of the dental profession, I am honored to have been invited to participate in the program of the Annual Scientific Assembly of the Kentucky State Medical Association.

I should like to preface my remarks by repeating to you a few simple statements that I present to lay groups when talking to them on the subject of Socialized Medicine and Dentistry. I tell them that Socialism, whether applied to dentistry or to medicine or to industry, has been defined as, "Government ownership or Government management of the Nation's economy; and the denial by the Government of the right and capacity of individuals to manage themselves and their property."

Socialized dentistry and medicine, then, is a system whereby the State assumes the responsibility and authority for the control of health service instead of the people managing it themselves, voluntarily and without government compulsion or interference.

Thus, when the Truman Administration advocated Compulsory Health Insurance, they proposed that the Federal Government should take over the health care of 160 million people on the assumption that the Government could do a better job than

*Presented at the 1954 Annual Meeting of the Kentucky State Medical Association, September 21-23, at Columbia Auditorium, Louisville, Kentucky.

the health professions were doing in making these services available to all the people, particularly the indigent and low income groups.

Insofar as dentistry is concerned, no one will deny that more dental care should be made available to more people. It can also be said that in an ideal society, no one should go hungry, and that educational opportunities and health care should be provided for everyone whether they can afford it or not.

But those of us in the health professions who are vitally concerned about the welfare of all the people, who are continually advocating preventive measures, who are devising more and more programs to increase the availability of our services and who are informed about the failure of government-sponsored health schemes elsewhere, know that socialized dentistry and medicine is not the solution of the problem.

Problems of Socialized Dentistry

Dental care in the United States, despite existing needs, is distributed more evenly and is of higher quality than in any other country of the world. And in every instance where there has been an attempt to nationalize health service, it has resulted in a deterioration of the quality of that service; not to speak of the tremendous cost which must necessarily be paid out of taxes collected from the very people for whom the service is intended.

There is another important aspect of the situation. It is estimated that only about forty percent of the people in the United States today are receiving dental care and for this relatively small segment of the population, the services of 80,000 dentists are required. If for any reason the number of persons seeking dental care was suddenly increased to any great extent, it is obvious that there would not be enough dentists to meet the demand. And it is not possible anytime in the foreseeable future for the dental schools of the United States to train enough dentists to provide complete dental care for the entire population, even under a system of Compulsory Health Insurance.

No laws enacted in Washington can create dentists and physicians and nurses. There is also the matter of distribution as well as numbers. People living in areas where none of these trained persons is available would receive no more attention than they are now receiving even though the Government sold them on the idea that the service was "free."

And what about the children? It is estimated that approximately one-third of our population is comprised of persons under 19 years of age. If each of these children received four hours of dental service on an average each year, (and that isn't very much) it would require the services of 100,000 dentists working 40 hours a week for 48 weeks a year to care for them. This means that if a program of service for children was put into effect, the adult population would have to be forgotten insofar as dentistry is concerned. Would the older patients yield to the children?

Let me tell you what has happened in a country similar to ours in many respects, where a scheme of socialized dentistry and medicine, or compulsory sickness insurance, or national health (whatever one may choose to call it) has been in operation for some years.

I refer to Great Britain where I visited some time ago to study their socialized health program under the sponsorship of the American College of Dentists.

British National Health Service

The Labor Government of that country launched its all embracing National Health Service on July 5, 1948. They said, "The aim of the National Health Service Act is to make all of the health services available to every man, woman and child in the population, irrespective of their age or where they live, or how much money they have; and to make the total cost of the service a charge on the national income."

In order that you may better understand some of the amazing developments that followed the introduction of the Scheme, as it is commonly called, let me briefly describe the general manner of dental practice under the new program.

Dentists continue to practice in their own offices, furnishing materials, equipment and personnel as always. They may do part-Scheme practice and part-private practice. For their services to Scheme patients they are paid by the Government, and for their services to private patients they are paid directly by the patient. The patient has the choice of accepting treatment under either arrangement. But there are not many private patients any more, for few people feel that they can afford to pay taxes for the health service and private fees to the dentist, even though, I am informed, the majority of them would prefer to have their dental

treatment under the private arrangement.

Dentists are remunerated by the Government on a fee-for-service basis. This involves a fixed scale of fees for various dental operations and is calculated on the erroneous assumption that all dentists spend the same amount of time in doing the same thing. Under the system it is possible for an unscrupulous practitioner to put in twenty-five fillings in one hour and to receive, accordingly, twenty-five times as much money from the Government as a conscientious practitioner would receive if he spent an hour in putting in one filling. This standarized method of remunerating dentists on a piecework basis places them all on the same level and destroys the incentive which makes for excellence of performance.

In introducing the new Health Scheme, six years ago, the Government promised the people a comprehensive health service. In a booklet prepared by the Ministry of Health and the Central Office of Information, the extensive provisions are enumerated as follows:

"The purpose of the Health Service is to provide advice or medical care for the individual man, woman, or child in need of them. Its range includes everything from advice on infant feeding to the surgery of the brain and the treatment of rare diseases, from care of mental defectives to blood transfusion, iron lungs, and artificial limbs; included also is all that goes with medical care, such as massage, the services of a midwife, treatment during convalescence, home nursing, use of ambulances, care of the eyes and teeth, drugs, special foods, spectacles, hearing aids and so forth."

The machinery for carrying out the provisions of the National Health Service Act was set into motion and on "the appointed day" the people of Britain made a mad rush for all of the numerous aids and services which had been promised them "without cost." Very soon waiting rooms of dentists and physicians in the Scheme were filled. Queues began forming at the establishments of chemists and opticians.

Personal Observations of Scheme

One night in Birmingham, I counted 37 people lined up in front of a drug store at 10:30 p. m. One of the attendants explained, "This goes on every night." Posted on the wall was a notice issued by the Ministry of Health which indicated the enormous demand for medicines and drugs. It read, "Please return all medicine bottles promptly and in a clean condition. By so doing you are assisting the smooth running of the National Health Service and are helping to keep down the cost."

A ministry official told me that one optician had made 25,000 eye tests in 12 months. This figures out to one every five minutes, eight hours a day, five days a week.

Dentists began working overtime. They accepted patients at night and on weekends. They gave up their vacations. They were forced to employ unskilled assistants. Even boys and girls were quickly recruited for this type of work. Though dentists were working longer hours, many patients could not find one willing or able to accept them, and often those who were accepted had to wait months for treatment.

I visited many dentists in their offices during my survey. One day in Manchester, after the same taxi driver had taken me around to about five different offices, he sympathetically remarked, "Maybe I could talk my dentist into taking you, Sir?"

Of course, people complained about the situation, but so did the dentists. A young, recent graduate practicing in Glasgow lamented to me, "If a dentist tries to do conscientious work he is criticized because the people can't get appointments; if he speeds up and takes care of a lot of people by working long hours and killing himself, he is criticized for making too much money."

Deterioration of Care of Children

As a result of this unnatural and unnecessary demand for health service, there quickly developed in Britain an unbelievable situation, for it became evident that virtually no dental service was being made available to the children and that even those who had been accustomed to regular treatment were now being deprived of it.

In order to understand how this tragic situation could come about, one should know that it has long been the custom in Britain for the public schools to provide dental service for children through an arrangement between the Ministries of Health and Education. By this plan, most of the children receive their dental treatment in school clinics by School Dental Officers, as they are called, who are paid straight salaries by the Government for full-time work, and who are not engaged in private practice.

Soon after the Scheme went into effect, these Officers began resigning in wholesale lots to open their own offices for the more lucrative practice which was resulting from the increased demand for dental service by the adult population. Many of these School Clinics, therefore, had to be closed. Today, in some areas, there is only one school dentist to several thousand children.

The Government is universally blamed for the present situation on two counts: first, because the salary of Public Dental Officers has not been adjusted to the proportionate level of that of private practice; and second, because in view of the shortage of dentists, the scope of dental services to be provided in the Scheme is too broad with respect to the adult population.

Many believe that artificial dentures, for example, should not have been included since their provision constitutes a large part of the present service. During the first three years, more than seven million sets of dentures were made. Assuming only one set to a person, this number constitutes about one-seventh of the entire population of only 50 million people.

Although the National Health Act had provided a "priority" dental service for children, the demand by adults for complete dental care is denying the younger generation their proper share of attention. As one dentist said, "I shall never understand why I have been compelled to give up saving the children's teeth in order to make dentures for the aged to be buried in."

It should be remembered that before the Scheme was introduced, the Government was urged by the professional organizations to limit the initial program to the care of young children and expectant and nursing mothers, since it was evident that there were too few dentists and physicians to meet the anticipated demand for the health services.

Why this timely advice was ignored by the Government can only be explained on the grounds that the National Health Service is a political issue. As one dentist told me, "A satisfactory service for children could have been brought into being, forthwith, only at the expense of the adult population and, politically, it would have been highly inexpedient to require a substantial contribution from workers and to deny them the benefits of the service."

No doubt the correct answer is that children have no votes and expectant and nursing mothers have no political influence; and "the Government, by the wrong people, of the right people, for the wrong people," as one Britisher described it, has no interest in the dental health of the future generation.

Efforts of British Dental Association

Recently, the British Dental Association called upon its own members to help remedy the deplorable situation. The members of the Association were asked, as an emergency measure, to set aside one-half day each week solely for the treatment of school children. The profession willingly responded to this request and when the results were tabulated, it was found that half a million hours per year had been offered, which it was estimated would provide treatment for about one million children.

In September 1953, the British Dental Association submitted to the Ministries of Health and Education, a memorandum outlining the plan and requesting that children in the school system be allowed to visit dentists in their offices during school hours.

Two months later the Ministries sent their official reply to the Dental Association rejecting the proposal and giving as their reasons:

(1) That the most effective way to provide school dental treatment was in clinics closely associated with school routine.

(2) That children could be treated in clinics at a substantially lower cost, and

(3) That dental manpower could be used more economically in clinics.

The Association immediately prepared statements of protest which were sent to the Ministers, to the Press, and, through their representatives, to Parliament. They stated in no uncertain terms that the rejection of the profession's genuine offer was clearly a matter of the Government being more interested in saving cash than in saving the children's teeth.

The Editor of the British Dental Journal aptly expressed the profession's view point when he wrote:

"A man whose house is burning down does not refuse the help of a hastily organized chain of buckets of water because experience has shown that a regular fire brigade offers the most economical and efficient means of dealing with an outbreak of fire."

It should be made clear that while most of the dental service for children is done in school clinics, parents have the right to take their children to dentists in private practice, if they choose to do so, provided the children are taken outside of regular school hours.

In view of the breakdown of the School Dental Service, the British Dental Association appealed to the Minister of Health to undertake a campaign to publicize to all parents both the necessity of having their children's teeth examined three times a year and also the fact that if this cannot be done under the local school dental service, the parents should take them to a private dentist.

In the reply from the Ministry of Health, the following paradoxical statement appears: It said,

"The value of publicity in encouraging the proper care of children's teeth is fully recognized. It is felt, however, that this publicity should be addressed to a selected audience rather than to the public at large . . . "

Without Cost

It is impossible to comprehend how a decision of this nature could be reached in any other way except in the interest of reducing expenditure on the National Health Service, without regard for the health and well-being of thousands of children.

This, in itself, is sufficient proof of the ulterior motives of the Government, but there is other evidence of its failure to live up to its promises to the people. While the children are the only ones who really matter, the adult population, too, are now being denied some of the services which, by virtue of the heavy taxes they pay for them, they are entitled to receive. And it has come to pass that the people of Britain have learned the meaning of "health service without cost" for in an effort to curtail the demand for the health services, the Government has imposed a series of direct charges on them for those items and services which the records show to be most frequently supplied.

The first step came when a bill was passed by Parliament requiring the public to pay one shilling (14c) directly out of their own pockets for each prescription filled.

Next, there was the introduction of direct charges of one-half the cost of artificial dentures and spectacles. These measures produced the desired effect for they resulted in a substantial decline in the demand for these items. For example, spectacles which previous to this regulation were being supplied at the rate of about 7,500,000 pairs a year, dropped to about 3,300,000.

More recently, a charge up to one pound ($2.80) has been imposed on adult patients for a course of dental treatment. This charge includes everything that the dentist, when he first examines the patient, says should be done. Again, as was expected, this regulation is appreciably lowering the demand rate for dental service. Moreover, it penalizes the very type of patient that the Health Service is meant to encourage, that is, regular patients who take care of their mouths, for under this system they now pay the whole cost since they need so little treatment each time they are examined. And too, it places a premium on neglect as indicated by the facetious British slogan, "leave your teeth a year or so and be sure to get your pound's worth."

The Dental Estimates Board

One condition of practice which is attended with far-reaching consequences for both the profession and the public, is the requirement that dentists must obtain prior approval of the Dental Estimates Board before they may begin any treatment for the patient except the most simple and inexpensive operations. Moreover, the Board must pass every estimate (whether it requires prior approval or not) before payment is made to the dentists for any of the services they perform.

There is much evidence that this government-appointed Board is limiting the nature of conservative treatment by viewing the dentist's recommendations in terms of the cost to the State rather than in the interest of the patient.

For this reason dentists are experiencing no difficulty in getting immediate approval for cases of extractions and dentures. It is a matter of record that even lay clerks in the employ of the Board have been authorizing thousands of recommendations for this radical type of treatment every day. On the other hand, when dentists submit estimates for gold inlays, bridgework and the like, it is not unusual for correspondence to be carried on during a period of weeks or months before a decision is finally reached. Since patients are annoyed by the inconvenience of having their dental work delayed while negotiations are going on between the dentist and the Board, it is understand-

able that many practitioners are tempted to acquiesce and sacrifice proper treatment for expediency.

Much criticism is directed against the Dental Estimates Board for alleged inefficiency and stupidity. A notable example is contained in a letter from a York dentist to the British Dental Journal in September 1953. He says: "On September 5 of this year an expectant mother attended for treatment . . . It was anticipated that the confinement would take place in March. Treatment was completed on September 12 and the estimate forwarded to the [Board] for approval of payment. Imagine my surprise when a few days later the [form] was returned to me with the request that I should give the year of the anticipated birth! !"

All of the dentists with whom I talked complained about the amount of time they had to spend in filling out forms and keeping special records, a task which it is estimated consumes at least seven hours of the average dentist's time per week. It is reported that the number of publications containing regulations is rapidly increasing and has reached such a stage that the dental schools are considering the advisability of giving graduating students a course on how to keep within the National Health Service.

A dentist recently reported a case in which the paper work, he says, accentuates the shortage of dentists. A patient came to him for the extraction of one tooth. The Identity Card had been burned some time before. The red-tape involved in permitting him to extract the tooth required seven signatures on four different forms, and he concludes that the sole reason for such nuisance would seem to be an attempt to reduce the unemployment rate of clerks.

Perhaps the following news item from the Yorkshire Post will emphasize the point:

"The members of a Junior class at Leeds Girl's High School were recently given the task of making sketches showing their fathers at work. One of the fathers is a dentist—an occupation which, one feels, offers the artist a dramatic, not to say gruesome, subject. His daughter's sketch showed him sitting at his desk filling in forms."

I have attempted to give you a brief account of the present status of dentistry in the National Health Service. Voices from the Ministry of Health contend that it is too early as yet to view the matter in true perspective and describe the present difficulties as "growing pains" which in time, they say, will be alleviated. But the humanistic observers view the future with pessimism because the course of events thus far indicates that the motives of the Government in promoting the Service are of political origin and are not dictated by a desire to improve the health and welfare of the people, especially that of the future generation.

British Opinions

Some of my British friends, out of a sense of professional brotherhood, have expressed concern over any proposed legislation for Compulsory Health Insurance in this country. One said, "It is all very alarming for the future of dentistry and I hope America may never have to face it. It is horrible to think that with all America has done for dental education all over the world that they must face being bobbled by such a situation." Another offered some indirect advice in saying, "Apart from the enormous amount of people who have received extractions and dentures free, I would say personally that the experiment, as our Ministerial friends are apt to term their work, is a colossal failure, and the only real good I can see it is doing is to point out to the rest of the world what not to do." And still another suggested, "If you ever begin a national scheme of free treatment, confine it to those who matter most in such a scheme, the children—who have no votes, but will eventually carry the health and destiny of your country."

In closing, let me express the hope that the medical and dental professions will not relax their efforts in bringing to the American people the lesson from overseas and in showing them that the introduction of a compulsory, government-sponsored scheme of National health, aimed at providing all health services for every man, woman and child in the population, can result in the deterioration and misdirection of available dental and medical care.

Kentucky Mental Health Laws*

FRANK M. GAINES, Jr., M. D.

Louisville

Kentucky's new mental health legislation was designed to accomplish the following:

1. To create an efficient administrative organization which could plan and execute a coordinated state mental health program.

2. To emphasize the medical aspects of state hospital admission and discharge procedures rather than the identification of mental illness with criminal procedures.

3. To eliminate outmoded terminology.

4. To prevent, as far as possible, the exposure of the person as a public spectacle.

5. To eliminate any financial inquiry which would serve as a bar to hospital admission.

6. To clarify and shorten some ambiguous sections of the statutes, and to eliminate certain obsolete restrictive sections.

Initial Study

In 1951 a study of the mental health laws was initiated by a committee of the Kentucky Psychiatric Association, and continued during the next two years in consultation with the Governor's Council on Mental Health. Tentative recommendations were made and several actual bills were prepared for submission to the 1952 legislature. However, at the suggestion of our legislative advisors, only one bill, creating the Department of Mental Health, was submitted, and the remainder was delayed pending further study. During 1952 and 1953 considerable research was done by a staff member of the Department of Mental Health, not only into the laws concerning the admission of mentally ill patients to hospitals, but also the other statutes which touch on the problem of the mentally ill and his rights, such as citizenship status, guardianship, etc. In 1953, in consultation with our Advisory Council and the Governor, two decisions were reached. First, the proposed legislative changes would be restricted to the hospitalization of the mentally ill, and, second, since many of the provisions of the old law were basically sound, the law would be revised rather than completely rewritten.

Department of Mental Health

Improvements in mental health administration were embodied in a bill creating an autonomous Department of Mental Health. Implicit in this measure was the recognition that mental health was big business in state government, both from the standpoint of money expended and the number of patients served. A separate functionally organized department, headed by a psychiatrist, has the advantage of independent presentation of program and budget to the Governor and to the public. The bill, which was passed unanimously as a part of the Governor's program, provided that the new department be headed by a psychiatrist with full administrative authority. It outlined the duties and functions of the department, emphasizing treatment as well as care of patients. It provided for the appointment of an Advisory Council of laymen and physicians; outlined the basic organization of the Commissioner's Office, providing for a Division of Professional Services and a Division of Business Administration. Subsequently, in the 1954 session of the legislature, the Division of Community Services was created to supervise the out-patient clinic program and to promote a public education program for mental health. Among the other sections of the law, political activity of any employee was prohibited, the right of appeal from discharge was established, and the department was given broad powers to set up training programs, both within the department and in outside schools and universities.

The Medical Aspects of Hospitalization

The need to emphasize the medical aspects of hospitalization procedures, rather than the identification of mental illness with criminal court procedures, has been long recognized. It was not easy to reconcile in a written law provisions for the humane handling of mentally sick patients, but at the same time insure that their legal rights were protected. The fear of illegal "railroading" of patients continues to be over-emphasized by many, yet there is no question but that a pa-

*Read before the Kentucky Psychiatric Association at the 1954 Annual Meeting of the Kentucky State Medical Association, Columbia Auditorium, Louisville, September 22, 1954.

tient's personal liberties must be safeguarded. For this reason, no material change was made in the regular court commitment procedure since this procedure must be available if the patient or the family demand it. However, a number of other sections in the statutes were altered or added in order to accomplish the emphasis on medical handling, as follows:

a. The Voluntary admission procedure was modified to allow for the admission of minors on the signature of a parent; the discharge procedure for voluntary admission procedure was clarified; and the length of time that a voluntary patient may be held after he has requested his release from the hospital was shortened to five days.

b. The Health Officer's Admission procedure was amended to lengthen the period of observation from ten to fifteen days.

c. Sections requiring the Committing Judge and the Commonwealth Attorney to provide a history of the patient's case were repealed, and authorization was granted for the Commissioner to revise the form of the petition and the physician's certificate, in order that more complete medical information would be available to the court and to the hospitals. Within recent weeks, these latter changes have been embodied in administrative regulations which have been filed with the Legislative Research Commission.

d. Several sections which dealt specifically with drug addicts and epileptics were repealed, since it was felt that these patients should be dealt with on the basis of their mental illness, rather than being singled out as special groups.

e. A new section to the statutes proposed the development of a family care program for patients in state hospitals, where the patient would be benefitted by care and associations of a home environment before returning to his own community.

f. Another new section created a new type of admission to state mental hospitals on the application of a relative, friend or guardian of a person believed to be mentally ill, and the medical certification of two physicians substantiating this mental illness and the need for care and treatment. Under this measure, a person may be admitted for an indefinite period of time to a mental hospital as to any other hospital without the social and psychological stigma which attends commitment proceedings, and without the loss of his civil rights and control of his property. The person is safeguarded by an explicit privilege of communication and a right to his release immediately, or within five days, as provided for voluntary patients. This was primarily designed to be used for those patients who are not sufficiently well to accept a voluntary admission, yet who have a good prognosis and can be expected to obtain an early release. It should not be used in the admission of paranoid or disturbed patients for whom it is clear that eventual regular commitment will be necessary.

g. Coincident with the preparation of these revisions, a judge of the Jefferson County Circuit Court carried through a proposal that the mental inquest be transferred from the criminal division to the civil division of the Criminal Court. This was accomplished about six months ago. We eventually hope to propose this idea to the two other jurisdictions in the state which have separate criminal and civil divisions of their Circuit Courts. The problem of personal service of subpoena on the patient who is to be committed has not yet been settled and will require clarification by a test case in a higher court.

Outmoded Terminology

Out of date terms describing mentally ill and mentally defective persons, such as "idiot, lunatic, feebleminded and insane" were eliminated and in their stead more modern and humane definitions were used. In most cases, the new terminology was suggested by the United States Public Health Service Model Law entitled "A Draft Act Governing the Hospitalization of the Mentally Ill."

Prevention of Public Spectacle

A section in the old law allowed the patient to remain away from the inquest proceedings provided the physicians certified that it would be detrimental to his best interests to attend. In addition to this, a new provision allows the department to keep confidential all records identifying a patient, a former patient, or a person who has sought hospitalization.

Financial Inquiry

Courts are still required to make an inquiry into the financial condition of the patient. However, the old section in the statutes requiring a patient to pay six months board in advance was repealed, in order that it might not serve as a bar to patients who require hospitalization and

(Continued on page 518)

CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

Presentation of the Case:

Alex J. Steigman, M. D.

Department of Pediatrics

Erythroblastosis has been chosen as a disease to be discussed both because of the emergency nature of this illness and to demonstrate that prompt and proper therapy can be of great importance in preventing complications. The case will be presented by one of our residents.

M.M. Case No. 27837

The patient was admitted to the hospital on June 2, 1954 at which time she was two hours old. The child was the product of a fourth pregnancy of a mother whose blood was known to be Rh negative. A year previously, when the third sibling was born, the diagnosis erythroblastosis was made and the child was treated with an exchange transfusion with success. This child has no sequelae of the disease. During the pregnancy the mother was treated with cortisone and her RH antibody titer was demonstrated to have dropped from 1:200 to 1:30. The child had been born by precipitate delivery in the eighth month of pregnancy but weighed 5lbs. 10 oz. at birth. Jaundice, although absent at birth, began to be noticed shortly afterwards and within two hours the child, accompanied by a clotted specimen of the mother's blood, was transferred to the hospital for treatment.

The principal findings were those of a moderate jaundice of the skin with no maceration. The spleen was palpable two centimeters below the left costal margin. The child's general color and activity was good. The initial hemogram showed: hemoglobin 13.5 grams, red blood count 4.5 million, white blood count, 9,800, neutrophils 52, lymphocytes 48, nucleated red blood cells 24. The Coombs test was positive.

Course in Hospital

Since the child was immature, anemic, jaundiced and had splenomegaly a transfusion was started within the hour. A polyethylene catheter was inserted into the umbilical vein, a technical procedure which was done without difficulty. Five hundred c.c. of exchange blood followed by an additional five c.c. were given during the transfusion. The tubing system was irrigated with saline before and after each installation of calcium gluconate to prevent any clotting. The umbilicus was ligated following the withdrawal of the catheter and the patient was returned to the ward in good condition. Chloramphenicol and penicillin therapy was instituted immediately.

Shortly following the transfusion the total serum bilirubin was noted to be 11.4 mgms percent. Twelve hours later this had risen to 17.7 mgms. percent and it was decided that another exchange transfusion was indicated. The second transfusion was performed with ease using the same site. By the following morning the jaundice was clinically less noticeable, the total bilirubin had fallen to 11.4 mgms. percent and continued to fall during the child's stay. The child maintained a hemoglobin in the neighborhood of 12 to 13 grams and at the time of discharge on the 6th hospital day her red count was 4 million and her hemoglobin 12.3 grams.

Discussion

Dr. Steigman: This case well illustrates the importance of an early and accurate diagnosis. It has become accepted that the physician know the Rh type of every pregnant woman in order to anticipate potential problems such as are here illustrated. Since typing sera have become commercially available, such determinations are potentially available in every hospital laboratory or even in a physician's office. If this procedure is not locally available, the larger blood grouping laboratories will gladly perform maternal antibody determinations for any physician. Such anticipation makes possible the preparation both of individuals and services to cope with the emergency when it arises. Such preparation has begun to eliminate one of the possible causes of infant mortality.

We have asked Dr. Starr to express the feeling of the obstetrician in this phase of the subject.

SILAS STARR, M. D.
Professor of Obstetrics

It is pertinent to re-emphasize Dr. Steigman's statement that each prenatal patient should have an Rh determination. If it is negative, the factor should be determined in her husband; and if he is positive, antibody titers should be investigated. It is generally agreed that if antibodies do not appear in her blood before the end of six months of pregnancy, the likelihood of erythroblastosis is remote. Cortisone is one of the therapeutic agents employed in an attempt to neutralize the antibodies or to prevent their transmission to the fetal circulation. Other agents that have been used are red blood cell extracts, methionine and various endocrine products. In our experience, none of these has been reliable and they are usually of no benefit. Immediate examination of the cord blood and immediate treatment have been the important factors in improvement in neonatal results.

The decision to transfuse the child is based on clinical judgment aided by laboratory determinations. Dr. Diamond will comment on the latter.

ISRAEL DIAMOND, M. D.
Department of Pathology

At the time of delivery of the baby of an Rh negative mother, cord blood should be collected for Rh typing, hemoglobin and direct Coombs test determinations to aid in the decision of an exchange transfusion.

The presence of a positive Coombs test with hepatosplenomegaly or a cord hemoglobin of less than 15 grams is sufficient indication for an exchange transfusion. This is true whether the Rh is positive or negative and even when clinical jaundice has not yet appeared.

DR. STEIGMAN: Thus, with these laboratory findings, if careful inspection of the infant shows pallor, edema, petechia or enlarged spleen or liver, the indications for an exchange transfusion may be summerized as follows:

1) A history of erythroblastosis in a previous sibling manifested by previous exchange transfusion, hydrops fetalis, kernicterus or severely jaundiced babies who are thought to have had this disease.
2) The clinical appearance of jaundice during the first 24 hours or enlarged spleen or marked pallor.
3) A cord hemoglobin level below 15 grams per 100 ml.
4) A maternal antibody titer above 1:64 during the pregnancy.
5) Clinical immaturity (less than 38 weeks gestation)

The exchange transfusion is more than life saving. It is also important in preventing the very serious complication kernicterus. In this condition portions of the brain become stained by the accumulated bilirubin and the resultant difficulties are neurologic manifestations of cerebral palsy, particularly the athetoid state. Such difficulties can occur even following transfusion. It becomes important to follow the depth of the jaundice in the individual and to check this with serum bilirubin levels. Using this as a guide, the serum bilirubin level approaching 15 milligrams percent during the first twenty four hours or 20 milligrams percent between the first and fifth days of life serves as a definite indication for an initial or repeat exchange transfusion.

DR. DIAMOND: It should be emphasized that transfusions are most successful if female type O blood Rh negative is used as a donor blood. Such blood is usually available in areas where blood bank facilities have been established.

DR. STEIGMAN: It is worth re-emphasizing that preparation for treatment makes the possibility of complete and immediate exchange transfusion a readily available tool in combating the disease erythroblastosis. Not only does it prevent the immediate and fatal outcome of the situation but it is of great importance in reducing the amount of circulating bilirubin so that the damaging condition of kernicterus can be avoided. Recent experience with this disease has shown a marked degree of success in handling what was at one time a disastrous and fatal condition.

SPECIAL ARTICLES

A PHYSICIAN LOOKS AT THE HOUR GLASS

WYATT NORVELL, M. D.

John Masefield, Britain's Post Laureate, when asked what poem had given inspiration to his career, cited this verse:

Sitting still and wishing,
Makes no person great,
The Good Lord sends the fishing—
But you must dig the bait!

I believe this little verse fits the subject on which I'm talking, that of utilizing our present health and medical resources. If I may, I shall reverse the order of events and speak on medical care first, then proceed to the subject of Kentucky's health resources. Two things that are often confused are medical care and health. Doctors themselves get these confused, seeming to think that when you mention health you are also speaking of medical care. A distinction should be made between the two. Medical care is the job of the medical profession—that is to train boys and girls to become good, humane doctors. Health is the responsibility of everyone, from the little kid on the street corner with the dirty face, to the multi-millionaire sitting in his mansion. It is the responsibility of each to see that the other has good health. Medical care is a procurable commodity. Physicians are trained in our medical schools to go into the communities and set up the proper facilities to take care of the rural people. Thank God, there has been an increase in the number of young fellows who are becoming country doctors, or, as I see it, family doctors!

Dr. Norvell

The very backbone of our life as I see it from the medical standpoint, is the family physician. Not too many years ago the family physician was thought of as not having the intelligence of the specialist. If I may say it, when I reach the end of my life, I prefer having on my tombstone the words: "Wyatt Norvell, Family Doctor" than the words, "Sir Alexander Fleming, Discoverer of Penicillin." "I would like to think that when life is done I had filled a needed post; that here and there I had paid my fare with more than idle talk and boast; that I had taken gifts Divine, the breath of life and manhood fine, and tried to use them now and then in service for my fellow-men."

You are not going to find the family doctor at every crossroads—why? Because transportation is much more rapid than it was 50 years ago. When I was born in 1915 there were four doctors in my home town. This number was necessary because the people could not travel to town in those days as they can and do now. After completing four years in the Air Force as a flight surgeon, I decided that I wished to practice medicine in the county seat of the county in which I was born. That was some eight and a half or nine years ago. When I started my practice in that county, I had a car that was pretty well beat up and an army jeep that I had procured from the Army Surplus for, I believe, $620. I had some flappy curtains on it, and there were some nights that I arrived at the country home of a patient more frozen than alive. I spent about two-thirds of my working day traveling around the countryside in my jeep, seeing individuals in their homes. This was not the type of medical care that I wished to give the patients. It was impossible for me to give good medical examinations in the home, and I could not take care of as many people due to the time consumed in traveling between the homes. I mentioned this to the young cashier of the bank in New Castle. He took the facts before the Loan Committee of the bank, and one of the men on the committee asked, "What collateral does he have?" His answer was "Character," and he added, "We need medical care in this community."

Well, I got the loan, I built the clinic, and I have been thankful to say that I am at least beginning to see "the sun come up in the East" in my indebtedness to the bank. Why did I use this personal illustration? I used it to drive home a point. We hear so much about the need for hospitals, and I believe if you let some individuals have their way, there would be a hospital

at every crossroad town of two houses. The nation would become bankrupt, and it couldn't be very long until the hospital would be in the hands of a receiver. The answer to our medical resource work is the use of clinics. Eighty-five per cent of the people whom I see can be taken care of and diagnosed in my clinic and can then be treated either in the home or by daily visits to the clinic. There is a small 30-bed hospital about 13 miles from where the clinic is located. An individual who is in need of more definitive care can receive it in this hospital.

Another addition to our national and health resources is the recent founding of the American Nursing Home Association. This group has done much to remove the "pest-home" care of our ageing population. Many of the beds in our hospitals could be released for acutely ill patients if more nursing home beds were available for the elderly and chronically ill patients. It has been proven that the senile patient does react better in the friendly surrounding of the "home-like" nursing home and rather poorly in the well-regulated hospital atmosphere.

So I would say to you as you go back home—think about helping the young doctor when he finishes his medical education, help him get started in the community, show him that you want to give him the facilities he needs, encourage the bank to back him so he can properly equip himself. He needs your help because most young physicians, upon completing their education, not only do not have any money, but usually are in debt. The rural communities needing a doctor, or wishing to keep the ones they have, must be communities in which it is good to live, where doctors and their wives will be willing to bring up their children. We hear much about "returning to the old days." I am certainly in agreement with one part of the idea of returning to the old days, and that is the old-fashioned custom of house-raising and house-warming when a young couple marries and needs a home. Formerly, it was customary for everyone to get together and help raise a house so the young couple would have a home in which to start their family. If I may quote from Leonardi Da Vinci: Codex Atlanticus:

The age as it flies, glides secretly,
And deceives one another;
Nothing is more fleeting than the years
But he who sows virtue, reaps honor.
Wrongfully do men fight time
Accusing it of being too swift,
And not perceiving that its period is yet sufficient.
But with good memory has nature endowed us,
Causes everything long past to seem present,
In youth acquire that which may require you for the deprivations of old age.
And if you are mindful that old age has wisdom for its food,
You will so exert yourself in youth that your old age will not lack sustenance.
While I thought that I was learning how to live,
I have been learning how to die.
Life—well spent—is long!

Now to the problems of our health resources and how to properly utilize them. Health is a personal responsibility. It is the responsibility of the community in which you live. Each individual is dependent on the other individual. This goes back to the ideals on which our nation was established. Thomas Jefferson, who, we say, is the Father of our Democracy, certainly a great President and statesman, but also an inventor, a musician, an architect and a farmer, believed in the importance of each individual.

Just what do you want out of life? Do you want to leave life the same— or worse than when you entered? Men in the past have smoothed the way. They raised the ideals; they raised the way of life. Be careful to have clean ideals and not the selfish outlook of silver-spoon bureaucrats or the unchristian attitudes of the Communists.

Before a Rural Health Council was established in my county of 11,000 population, the TB X-ray unit came through, and we got 520 chest X-rays made. Then the Rural Health Council was established. The next year we got 1485 chest X-rays. After that everyone seemed to get an idea of what could be done. So the program was completely organized. One of the fine young Baptist ministers served as publicity chairman; another individual who was a farmer, with a stature of six feet seven inches, weighing 260 pounds, was the "stevedore" or the "whip" of the organization, in other words, the chairman of the Rural Health Council. And he saw to it that there was a shuttle-bus system worked out in the county, that the high-school children acted as stenographers, that the organization was put over, and as a result, we had better than 2000 chest X-rays made under this set-up. Isn't this an

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EDITORIALS

"SENIOR DAY—A STEP FORWARD"

Among the more practical projects developed by state medical associations as they strive to be of more service to the profession and the public, is the "Senior Day" program. Only a few associations have as yet undertaken this new program. This year Kentucky joined this pioneering group when the project was staged April 18 in Louisville.

Purpose of the "Senior Day" effort is to provide fourth year medical students with practical suggestions and ideas designed to help them bridge the gap between academic medicine and its day-by-day practice. This is material which has not been included in the modern medical school curriculum for the simple reason that there just is not time for it.

Medical students were well pleased with the initial K.S.M.A. effort. All seemed to feel that the day was very profitable. "I wish I could have attended a day-long program like that before I went into practice" several "old-timers" were heard to say after sitting in on the program, which would indicate their reaction to it.

The special K.S.M.A. Senior Day Committee which planned, developed and staged the program is worthy of high commendation. The Committee showed excellent judgment in the choosing of material presented, the care exercised in the selection of the talent who made the presentations, and the careful planning that went into the day's effort as a whole.

The splendid cooperation of Dean J. Murray Kinsman, M.D., of the Medical School, the Jefferson County Medical Society and its members in individually acting as hosts to the individual members of the Senior Class for the dinner, was rightfully called by K.S.M.A. President, Clyde C. Sparks, M.D., "a most substantial contribution to the success of the program." The 1955 effort has certainly set a standard that subsequent committees may find it difficult to match.

PREVENTABLE ALLERGIES

Allergies develop as the result of exposure to a great variety of substances which enter the body chiefly by the following routes: 1. The respiratory tract. We inhale pollens, fungus spores, animal danders, house dust, various occupational dusts, etc. 2. Through the alimentary tract we take in foods and drugs. 3. By parenteral injection we receive numerous drugs, antibiotics, glandular extracts, vitamines, and even insect stings and bites. 4. The skin is exposed to various plants, drugs, chemicals, cosmetics, fabrics, dyes, etc., at work, in the home, during recreation and vacation. 5. Allergy may also develop as the result of infection or infestation with microorganisms or other parasites which enter the body by any of the routes named above or otherwise.

Allergies develop, in other words, as the result of contact with numerous substances to which we are exposed in our daily lives. In most instances these contacts cannot easily be avoided. There is, however, one outstanding exception, namely drugs. Physicians can choose the drugs they administer. They therefore have the responsibility of avoiding the *unnecessary* use of certain drugs, exposure to which frequently results in allergy.

Penicillin is an outstanding example of such a drug. The promiscuous use of Penicillin (and to a less extent of other antibiotics) for trivial infections, such as the common cold, is undesirable for several reasons. 1. It exposes the patient to possible sensitization to the drug which, should it develop, adds to his discomfort, loss of time at work, expense and, in addition, may prohibit the later use of the drug for a really severe infection for which it is needed. 2. It exposes microorganisms to the drug enabling them to become drug-resistant. 3. It may interfere, theoretically, at least to some extent, with the development of a strong natural immunity

and 4. It is an economic waste. Antibiotics should be given when they are really needed but not promiscuously. Allergy may develop from oral administration as well as from parenteral.

Numerous other examples could be cited of drugs which sensitize the liver, blood-forming organs, etc. Attention is here directed to the skin, which has certainly been subjected to a great deal of abuse in recent years. An example will suffice to illustrate the point. A few pimples, a little seborrhoea, a burn or small patch of dermatitis may set into motion the following chain of events: A mercurial antiseptic is applied locally. In a few days redness, swelling and itching occur. To relieve the itching a local anesthetic or perhaps an antihistamine is applied. Following a few days of improvement the condition suddenly flares up and spreads to other skin areas, may become generalized and require hospitalization, entail loss of working time, expenditure of money and result in economic waste. The patient finally recovers when local applications are changed either by accident or because somebody thinks of the possibility of sensitization to locally applied drugs.

Incidents such as this, occur frequently because many of the local applications on the market contain strong sensitizers. Especially pernicious are local anesthetics, such as benzocain, nupercain, pontocain, surfacain; local antiseptics, especially the mercurials. Antihistamines, coal tar, ichthyol, picric acid and benzoin are also frequently involved.

Local anesthetics and antihistamines contribute almost nothing to the local treatment of dermatoses which cannot be accomplished much more safely by such simple preparations as calamine lotion or zinc oxide ointment.

FRANK A. SIMON, M. D.

CHOLECYSTOGRAPHY, A HELPFUL PROCEDURE

Accuracy in diagnosis of gallbladder disease has been made possible largely through use of the Cholecystogram. No laboratory or x-ray procedure has been more energetically pursued and improved during the past thirty years than this one. It has added much to our knowledge of gallbladder function and has become an essential guide in differentiation of surgical from non-surgical disease. Yet it remains a test largely for function and for the presence or absence of stones. An infected gallbladder may, during quiescent periods, show good function. Clinical judgement still is necessary. We may err in assuming that the organ is normal solely because one or more Cholecystograms have shown good function and failed to reveal stones.

Materials used in performing this test have been constantly improved until the toxicity is remarkably low, and efficiency in concentration of dye is consistently good. Improvement in x-ray techniques has added to the accuracy of the test quite as much as has refinement of the dye preparations used. The establishment of reliable techniques in preparation of the patient for the test is also an important factor.

A single Cholecystogram in which no function is shown cannot be regarded as a thoroughly reliable test upon which to base a decision to do surgery unless stones are demonstrated, or unless the clinical indications are classical. The test should be repeated, preferably after an interval of days or weeks. Two or three tests of non-function constitute a far more reliable criterion for surgery than a single one. Should the gallbladder repeatedly show non-function after tests using good technique, one can reliably assume that stones are present in a very high percentage of cases. Increasing the amount of dye used in succeeding tests is rarely helpful with the improved preparations now in use, although occasionally such a maneuver may demonstrate stones not previously shown.

The recent development of refined dyes for intravenous use gives promise in showing stones not previously visualized, but more especially in outlining clearly the common and hepatic ducts in instances of previous cholecystectomy. The demonstration of stones in these ducts has been accomplished by this technique, whereas exploratory operation previously was the only reliable recourse. The method is as ineffective in the presence of jaundice or severe liver damage as has been the oral administration of dyes. It is indicated for

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ORGANIZATION SECTION

Editor AMA Journal Among 1955 Annual Session Speakers

Editor and managing publisher of the Journal of the American Medical Association, Austin Smith, M.D., Chicago, will be a featured speaker at the 1955 Annual Meeting of the Kentucky State Medical Association, to be held in Louisville, September 27-29. "The Changing World for Medicine" will be Dr. Smith's subject when he addresses the general scientific session on Wednesday afternoon, September 28.

Dr. Smith

Dr. Smith, who also edits the scientific publications of the A.M.A., is executive editor of the World Medical Journal. He has written several books, the latest being "Modern Treatment—A Guide for General Practice," which he wrote in 1953 in collaboration with Paul L. Wermer.

In addition to his editorial work, Dr. Smith is professorial lecturer at the University of Chicago's department of pharmacology and is chairman of the board of directors of the U. S. Committee of the World Medical Association. He holds membership in the Society of Experimental Biology and Medicine, the American Society for Pharmacology and Experimental Therapeutics, and the American Pharmaceutical Association, among others.

Representing the Kentucky State Dental Association on the Annual Meeting program will be Frank B. Hower, D.D.S., Louisville oral surgeon. Dr. Hower will speak on Tuesday morning, September 27, on the topic, "Some Oral Surgery Cases of Interest to the Physician."

Dr. Hower

Dr. Hower, past president of the K.S.D.A., is serving as chairman of the Council on Hospital Dental Services for the American Dental Association. He is a charter member of the American Board of Oral Surgery and is secretary of Society of Oral Surgeons. A graduate of the University of Louisville School of Dentistry, Dr. Hower is a professor of minor oral surgery there.

Among the out-of-state speakers of the nine specialty groups will be Peter L. Scardino, M.D., Savannah, Georgia, urologist, who will be the guest of the Kentucky Chapter of the American Academy of General Practice. He will speak twice on Thursday, September 29, on subjects to be announced.

Dr. Scardino

Dr. Scardino, who spoke at the Fifth Annual County Society Officers Conference in April, was certified to the American Board of Urology in 1951. A native Texan, Dr. Scardino is a graduate of the University of Texas School of Medicine. He interned at St. Louis City Hospital, St. Louis, Missouri, and was resident urologist at Johns Hopkins Hospital, Baltimore, in 1948-49. He served as Lt. Commander of the Medical Corps, U.S.N.R., from 1942 to 1946.

Another specialty group speaker will be Edgar M. Medlar, M.D., Ithaca, New York, chief pathologist of the Division of Tuberculosis of the New York State Department of Health. Dr. Medlar will be the guest of the Kentucky Chapter of the American College of Chest Physicians.

Dr. Medlar

On Tuesday, September 27, Dr. Medlar will address the general session on the subject, "Some Variations in the Disease, Pulmonary Tuberculosis." He will speak to the Kentucky chest physicians at a luncheon on Wednesday, September 28, and again during their chest symposium on Thursday afternoon, September 29.

Dr. Medlar's luncheon topic will be "The Continuing Problem of Tuberculosis as a Pathologist Sees it," and during the symposium he will speak on "The Residue of Disease after Chemotherapy." In 1953, Dr. Medlar was the recipient of the Trudeau Medal from the American Trudeau Society.

Specialty Groups Will Convene Sept. 29 During Annual Mtg.

Popular feature of the 1954 annual session—the afternoon devoted to the specialty group meetings—will be scheduled again at the 1955 annual session, Clyde C. Sparks, M. D., Ashland, Chairman of the Committee on Scientific Assembly, has announced.

Each one of the nine specialty groups who will participate in the meetings on Thursday afternoon, September 29, will present an outstanding nationally-known speaker. These same speakers will address the general sessions of the annual meeting earlier in the week, according to Dr. Sparks.

"Adequate, comfortable quarters for each one of the nine specialty group meetings on Thursday afternoon have been arranged," Dr. Sparks said. "Two churches with spacious auxiliary meeting rooms have been good enough to lend the rooms to our specialty groups," Dr. Sparks continued.

While these nine specialty groups are in session any KSMA member is privileged to move from one group meeting to another to hear whatever program is of greatest interest to him. It was stated that having the specialty group meetings on Thursday afternoon would be particularly attractive to local physicians, many of whom take that day off.

Present plans call for carrying the first draft of the full program for the annual meeting in the July issue of the Journal of KSMA.

Joint 12th-15th Districts Session to be at Falls, June 16

The Twelfth and Fifteenth Councilor Districts will again hold their annual sessions jointly at DuPont Lodge, Cumberland Falls, according to an announcement made by Twelfth District Councilor Garnett J. Sweeney, M.D., Liberty, and Fifteenth District Councilor Charles B. Stacy, M.D., Pineville.

Wives of the members of both districts will be invited to the June 16 meeting. The scientific session of the meeting, which will be presided over by Dr. Sweeney, is to begin at 4:00 p.m. EST. Dr. Stacy will preside at the dinner meeting starting at 6:00 p.m.

"Your Stake in Organized Medicine" will be discussion by K. S. M. A. President Clyde C. Sparks, M.D., Ashland, as one of the features of the dinner meeting. Thomas L. Lomasney, M. D., Knoxville, Tennessee, will present a scientific paper entitled "Constrictive Pericarditis" following Dr. Sparks' discussion.

The afternoon scientific program, over which Dr. Sweeney will preside, will present three Louisville physicians as speakers. Robert L. McClendon, M.D., will talk on "Advances in the Use of Steroids in Medicine;" Walter S. Coe, M.D., is to talk on "Hepatitis and Cirrhosis;" and John Harter, M.D., will have as the title of his paper "Surgery in Heart Disease."

KSMA Announces Results of Survey on Indigent Care Funds

"A Report By The Kentucky State Medical Association on A Study of Indigent Medical Care in Kentucky" was given its release to the public by the K.S.M.A. Committee on Medical Service on June 2, according to Gaithel L. Simpson, M. D., Greenville, Committee chairman.

The release of the study, with K.S.M.A. Council approval, culminated work by the Committee on Medical Service which extended over more than two years which were spent in planning the study, collecting and evaluating data, and development of recommendations.

The following physicians served on the committee during the period devoted to the study subsequent to its authorization by the Council in 1952: Kenneth L. Barnes, M. D., Princeton; Walter Cawood, M. D., Harlan; John Haynes, M. D., Madisonville; Robertson O. Joplin, M. D., Louisville; Alfred O. Miller, M. D., Louisville, and C. C. Waldrop, M. D., Williamstown.

The study was based on an on-the-spot survey made in 13 counties selected as representative of the state by James W. Martin, Ph.D., Director of the University of Kentucky Bureau of Research, and information obtained from city and county officials and general hospitals throughout the state. In its planning and implementation of the study, the Committee on Medical Service was assisted by the A.M.A. Council on Medical Service and its staff.

The study was intended to ascertain the manner in which and the extent to which public agencies within the state were meeting their responsibilities for the care of the indigent sick.

The information obtained through the study "clearly substantiates the view that the public agencies of most Kentucky Counties are not at present financially able to adequately meet the demand of the indigent for medical and hospital care. With relatively few exceptions, the bulk of the medical care and its adjuncts now being received by the indigent are provided by hospitals, pharmacists, nurses, dentists, and physicians gratuitously."

The report recommends that state funds be appropriated on a sliding scale to assist the counties in the development of adequate medical care programs for their indigent. It suggests that priorities be given in the provision of such care to those on federal public assistance programs and certified as indigent on the county general assistance rolls. The view was expressed that hospitalization needs of these categories be met first.

A.M.A. Chief to Speak at 1955 KSMA Presidents Luncheon

Elmer Hess, M.D., Erie, Pennsylvania, president of the American Medical Association, will be the top attraction at the K.S.M.A. President's Luncheon during the Annual Meeting, President Clyde C. Sparks, M. D., Ashland, has announced.

Dr. Hess

This featured non-scientific program will be held Wednesday, September 28, on the Roof Garden at the Brown Hotel, starting at 11:45 a.m. The luncheon will be over in time for attendants to return to the Columbia Auditorium for the 1:30 Color TV Program.

The new A.M.A. president, who is to be inducted at the 1955 meeting in Atlantic City this month, will be remembered for his outstanding address here in 1953 before the Officers Conference.

Dr. Sparks to Address 4th District June 23, at Bardstown

June 23 has been set for the annual dinner meeting of the Fourth Councilor District at the Bardstown Country Club, Keith Crume, M.D., Bardstown, councilor for the district, has announced. Wives of the members are invited.

K.S.M.A. President Clyde C. Sparks, M.D., Ashland, will address the group on the subject "From Here to Where—How?"

The scientific portion of the program will be delivered by Condict Moore, M.D., and L. Douglas Atherton, M.D., both of Louisville. Dr. Moore's subject is "Diagnosis of Mouth Lesions." Dr. Atherton will talk on "Practical Aspects of Urinary Tract Stone Formation and Preventive Measures."

The Nelson County Medical Society will be host to the group. W. H. Keeling, M.D., Bloomfield, is president of the county society, and James M. Millen, M.D., Bardstown, is the secretary.

Dr. Cole Made G.P. Pres.-Elect as Dr. Mack is Installed

Julian B. Cole, M. D., Henderson, was chosen president-elect of the Kentucky Chapter of the American Academy of General Practice as H. Burl Mack, M. D., Peewee Valley, was installed as president at its 1955 annual meeting in Louisville, April 20 and 21.

Dr. Mack succeeds Garnett Sweeney, M. D., Liberty. C. Walker Air, M. D., Ludlow, was named vice-president, and D. G. Miller, M. D., Morgantown, was re-elected secretary-treasurer. Charles G. Bryant, M. D., Louisville, was elected delegate to the national organization.

Senior students at the University of Louisville School of Medicine, their wives and sweethearts, were the guests of the Kentucky Chapter of the Academy at the annual dinner at the Brown Hotel, Wednesday, April 20. The dinner was attended by more than 450.

John F. Ganem, M. D., Louisville, received the annual award for outstanding clinical research. Honorary membership in the Academy was given to Dean J. Murray Kinsman, M. D,. of the University of Louisville School of Medicine, Herbert L. Clay, M. D., Louisville, director of the school's postgraduate training pro-

H. Burl Mack, M.D., Peewee Valley, left, installed by Garnett Sweeney, M.D., Liberty, retiring president of the Ky. Chapter of the American Academy of General Practice, at their annual dinner at the Brown Hotel, Louisville, April 20.

gram, Jonas L. Salk, M. D., of Philadelphia, and Robert Clark, Louisville Courier Journal reporter.

In his presidential address, Dr. Sweeney stated that the Academy of General Practice was organized solely for the purpose of bringing the latest advances in the practice of medicine to the local family doctor. Among the accomplishments of the past year he listed the establishment of the "Kentucky General Practitioner", a quarterly publication edited by Carroll L. Witten, M. D., of Louisville.

Drive Detects 200 New Diabetics in '54, Committee Reports

The 1954 Diabetes Detection Drive sponsored by the Kentucky State Medical Association resulted in the discovery of 200 new diabetics, it was reported by Carlisle Morse, M.D., Louisville, chairman of the K.S.M.A. Diabetes Committee, at a recent meeting of that committee.

It was stated that approximately 44,000 free urine sugar tests were reported by K.S.M.A. members during 1954 National Diabetes Week, as compared with 35,000 in 1953. An additional 1,400 persons were given blood sugar tests at the K.S.M.A. State Fair Exhibit.

Plans are now being developed for the 1955 Diabetes Detection Drive which will be held during the week of November 13-19.

Intern and Resident Ass'n. Holds 1st Annual Session, June 7

The first annual session of the Louisville General Hospital Intern and Resident Association will be held in Louisville on Tuesday, June 7, according to Walter S. Coe, M. D., and James C. Drye, M. D., of Louisville, who are in charge of arrangements.

The meeting is for current interns and residents of the Louisville General Hospital and all affiliated hospitals and for all past interns and residents of these institutions, who are automatically members.

The day's activities will open with a luncheon at the General Hospital at 12:30 CDST. At 1:30 p.m. there will be a tour of the hospital and at 2:30 p.m. there will be a scientific program consisting of five 20-minute presentations by members of the faculty of the University of Louisville School of Medicine in the Rankin Amphitheater. The day will close with a banquet at 6:30 p.m. at the Louisville Boat Club.

D. P. Hall, M. D., Louisville, is president of the organization which was founded last year. All former interns and residents of the member institutions have been contacted by mail.

The above was taken of John W. Scott, M. D., Lexington, on May 10, when Dr. Scott's portrait was presented to the Fayette County Medical Society.

Scott Portrait Presented as 350 Attend Fayette Dinner

A portrait of John W. Scott, M.D., Lexington, past president of K.S.M.A. and the Fayette County Medical Society, was presented to the Fayette County Society before 350 members and guest physicians at the annual dinner meeting, May 10, in Lexington.

"The Management of Hypertension" was discussed by Edwin Wood, M.D., clinical professor of medicine at the University of Virginia School of Medicine. Oscar O. Miller, M.D., Louisville, presented the portrait.

A Chicago artist, Edmund Geisbert, was commissioned by a group of Lexington physicians to paint the portrait of Dr. Scott as a token of their high esteem for his contribution to the ethics and standards of the profession.

The following is a portion of the remarks made by Dr. Miller in presenting the portrait: "This is a worthy and beautiful tribute that you pay to an outstanding physician, one who has always been in the forefront of medicine; one who has shed lustre on the profession and has kept its escutcheon untarnished. I have always admired his physical and mental vigor. Ready to challenge any deviation from accepted practices or principles; a lion in debate with devastating logic and convincing arguments."

Senior Day Considered Success by Students and KSMA Officers

The first annual Senior Day, sponsored by the Kentucky State Medical Association in close cooperation with Dean J. Murray Kinsman, M. D., of the University of Louisville School of Medicine, and the Jefferson County Medical Society, was, according to reports from both students and K.S.M.A. officers, highly successful.

Vincent Pierce, M. D., Covington, chairman of the special Senior Day Committee composed of Louisville physicians Glenn Bryant, W. O. Johnson and Karl Winter, stated that he was more than pleased with the results of this first effort on the part of the Association to help the student bridge the gap between academic medicine and the actual practice of medicine.

Clyde C. Sparks, M. D., Ashland, K.S.M.A. president, addressed the first of the three sessions of the program in Rankin Auditorium at the Louisville General Hospital on Monday, April 18. Dr. Sparks explained to the students their stake in organized medicine.

The second session was held in the Ship Room of the Kentucky Hotel, and was participated in by the following physicians: Oscar J. Hayes, M. D., Louisville; Carl Cooper, M. D., Bedford; Garnett J. Sweeney, M. D., Liberty; Coleman C. Johnston, M. D., Lexington; Ralph D. Lynn, M. D., Elkton; Richard G. Elliott, M. D., Lexington; L. Focian Beasley, M. D., Franklin; Robert C. Long, M. D., Louisville; William C. Hambley, M. D., Pikeville; Homer B. Martin, M. D., Louisville; Branham B. Baughman, M. D., Frankfort; and David Cox, M. D., Louisville.

The members of the Jefferson County Medical Society had as their individual guests members of the senior class at the final session in the Terrace Room. This social and dinner

During a break in the afternoon session of the Senior Day Program, April 18, senior students, James Marvel, New Carlisle, Ind., president of U. of L. School of Medicine class of 1955, and Miss Chemmie Everley, class secretary, discuss matters medical with Garnett Sweeney, M. D., Liberty, and Coleman C. Johnston, M. D., Lexington.

meeting was attended by approximately 400. Julian Price, M. D., Florence, South Carolina, was the featured speaker at the final session.

Wives and sweethearts of the students were entertained during the afternoon session in Parlor B. Mrs. Karl Winter, president of the Woman's Auxiliary to the K.S.M.A., arranged the program and entertainment, which was well received by the guests. Wyatt Norvell, M. D., New Castle, and Mrs. Clark Bailey of Harlan, spoke.

"Dr. Sparks and I want to express our deep appreciation to Dean Kinsman, the Jefferson County Medical Society and its members, who were hosts to the students, for their splendid assistance," Dr. Pierce said.

Dr. Bailey Wins Ky. AGP Award at April 20 Session

The retiring president of the Kentucky Academy of General Practice, Garnett Sweeney, M. D., presented the E. M. Howard award to Clark Bailey, M. D., Harlan, at a dinner at the Brown Hotel, April 20, during the two-day meeting of the Academy in Louisville. The award was accepted, in the absence of Dr. Bailey, by James Pope, a senior medical student from Harlan.

Dr. Bailey

Dr. Bailey, who is vice-president of A.M.A. and a member of its legislative body, and a past president of K.S.M.A., was honored last November in his home town, when some 200 of his friends and admirers gathered at the Lewallen Hotel in Harlan to pay tribute. He graduated from the University of Louisville School of Medicine in 1926 and has practiced in Harlan since that time.

Openings for 26 in 1955 Freshman Class Reported by U. of L.

Openings for 26 Kentucky students in its freshman class for next September were still available at the University of Louisville School of Medicine on April 20, according to an announcement on that date by Dean J. Murray Kinsman, M. D., Louisville.

The class was enlarged by action of the University of Louisville Board of Trustees early in January of this year from 100 qualified students to 124, and at the time of Dr. Kinsman's announcement only 98 students had been accepted.

Only Kentuckians would be accepted for the remaining vacancies, Dean Kinsman said. Ordinarily, applications are not accepted after December 31, but this year they will be taken to the last possible moment to allow Kentucky students to apply.

All Kentucky applications and their acceptance or rejection were reviewed at the Dean's request by the K.S.M.A. Medical School Committee. Arch Cole, M. D., Louisville, professor of anatomy, is director of admissions. Persons interested should write the admissions office at the medical school.

After the above story was released, the Dean reported that more than 100 requests for admission forms have been received. Many, however, came from persons not qualified for entrance. It was stressed that admission standards are not being lowered.

Dr. Kamp Succeeds Dr. Eller as City-Co. Health Director

Maurice Kamp, M. D., venereal disease control officer for the Chicago Board of Health, has been named health director of the Louisville-Jefferson County Board of Health, succeeding C. Howe Eller, M. D.

Dr. Kamp, a graduate of the Medical College of Virginia, Richmond, holds a master-of-public-health degree from Johns Hopkins University, Baltimore, and is a diplomate of the American Board of Preventive Medicine

From 1940 to 1944 he conducted a general public health program in the Clarksville, Jeffersonville and Charlestown, Ind. defense area. Prior to that he spent seven years in private practice. Following World War II he served as medical officer in charge of typhus control in Yugoslavia and Italy.

Dr. Eller, who resigned the health director post in March, will remain in Louisville as full-time chairman of the department of community health at the University of Louisville School of Medicine.

The Committee on Pesticides of the A.M.A. Council on Pharmacy and Chemistry has published a reprint from the Journal of A.M.A. of its latest report, entitled "Outlines of Information on Pesticides: Part 1—Agricultural Fungicides." This may be obtained by writing the A.M.A. headquarters office, according to Bernard E. Conley, M.D., secretary of the committee.

Louisville Physicians and Lawyers Form Law-Science Foundation

The Louisville Law-Science Foundation, believed to be the first of its kind in the nation, has been formed to provide a means whereby physicians and attorneys can discuss and take action on common problems.

First activity of the newly-formed foundation was a seminar on medical, legal, and medico-legal problems held at the Kentucky Hotel on May 24, designated by Governor Wetherby as "Law Day" in Kentucky.

Incorporators and members of the first board of directors include the following Louisville physicians: J. Murray Kinsman, dean of the University of Louisville School of Medicine; Gradie R. Rowntree, president of the Jefferson County Medical Society; R. Arnold Griswold, Arthur T. Hurst, J. Duffy Hancock, Laman A. Gray, and David M. Cox.

Representatives from the legal profession are: A. B. Russell, dean of the University of Louisville Law School; Raymond Stephenson, president of the Louisville Bar Association; William Loraine Mix, Robert L. Sloss, Henry J. Stites, Wilson Wyatt, and Theodore Wurmser, acting chairman of the incorporating group.

Thirty KSMA Members Attend ACP Session, April 25

Thirty KSMA members attended the annual meeting of the American College of Physicians in Philadelphia, April 25-28. It was reported that the attendance was the largest that the college had ever had at an annual meeting.

J. Murray Kinsman, M. D., dean of the University of Louisville School of Medicine and member of the Board of Regents of the college, was appointed chairman of the Nominating Committee for the 1956 annual meeting.

Sam A. Overstreet, M. D., Louisville, past KSMA president and medical editorial editor of the Journal of the KSMA, is the Kentucky Governor for the college.

Kentucky physicians registered at the meeting included the following: Paul E. Holbrook and Leslie Haines Winans, Ashland; James Thomas Gilbert, Jr., Harold Keen and Frank H. Moore, Bowling Green; Joseph H. Humpert, Covington; Lt. Col. Christian Gronbeck and Capt. James H. Darragh, Fort Knox; Noah L. Krall, Charles Edward Ranking, Allen L. Cornish, Lloyd D. Mayer, Harris Isbell and Albert A. Warren, Lexington; James A. Schroer, Newport; Jack Keeley, Owensboro; Robert Dyer, Harold M. Kramer, A. Clayton McCarty, William Peak, Robert Tillett, Richard Turrell, William C. Buschemeyer, Sr., J. Richard Gott, Jr., Lt. William McFarland, Harold Morris, Felix Olash and E. H. Sanneman, Jr., all of Louisville.

R. F. Dixon Takes Office as KPHA President for Coming Year

Raymond F. Dixon, deputy State health commissioner for administration services, took office as president of the Kentucky Public Health Association at the closing session of the three-day meeting held in Louisville April 20-22.

The association took under advisement the proposal of Bruce Underwood, M. D., State health commissioner, that membership be expanded to include everybody in the state interested in public health work. The proposal, endorsed by association directors, will be voted on by the membership at a later date.

Nearly 500 attended the sessions which were specifically concerned with public health education and the manner in which community surveys should be conducted to determine health needs.

Officers elected were: Miss Virginia Dodd, a clerk in the Estill County Health Department, Irvine, president-elect; Miss Edwina Robertson, Henderson County Health Department, vice president, and S. H. Henson, M. D., Marshall County, and Dow Collins, M. D., Letcher County, directors.

Dr. Elam Chosen Pres.-Elect of Ky. Dental Assn. April 21

Arthur M. Elam, D. D. S., Lexington, was named president-elect of the Kentucky State Dental Association at its annual meeting, April 18 to 21, in Louisville. John A. Atkinson, D. D. S., Louisville, was installed as president, succeeding E. A. Willis, D. D. S., of Owensboro.

In one of the best attended meetings of the association on record, 34 members were awarded plaques for having practiced dentistry for a half a century. R. Arnold Griswold, M. D., Louisville, chairman of the committee on trauma of the American College of Surgeons, was the guest speaker on the scientific program.

Other officers elected were A. P. Williams, D. D. S., Louisville, first vice-president; T. J. Boldrick, D. D. S., Owensboro, second vice-president; Paul Webb, D. D. S., Manchester, third vice-president. A. B. Coxwell, D. D. S., Louisville, was elected secretary-treasurer for the eighth time.

Surgical Group Meets May 8-11

The American Society of Maxillo-facial Surgeons, a national organization of surgeons who hold both medical and dental degrees, met May 8 through May 11 in Louisville. Louisville surgeons who participated in the program were Glen Spurling, Condict Moore, William Brodsky, Herbert Kerman, Jesshill Love, Joseph Hamilton, and Heinz Oppenheim.

Out-of-state surgeons who spoke included Adrian Verbrugghen, Chicago; V. H. Kazanjian, Boston, and Everett Sugarbaker, Jefferson City, Mo. Among topics discussed were neck surgery, ear reconstruction and cobalt-beam treatment for head cancer.

Sister Mary Edgar to Head K.H.A.

The Kentucky Hospital Association selected Sister Mary Edgar, administrator of Sharon Heights Hospital, Jenkins, as president-elect at the close of its annual meeting in Louisville, April 12-14. Sister Mary Edgar will take office in March, 1956.

John Buschemeyer, of General Hospital, Louisville, became president of the association this year, succeeding Edward Horgen, Kings' Daughters Hospital, Ashland. Other officers elected were Brig. Gen. Alvin H. Wood, Covington, treasurer; S. A. Ruskjer, Waverly Hills, S. A. Lott, Pikeville, and Leslie Reynolds, Henderson, to the Board of Trustees. Lexington will be the site of the 1956 meeting, March 17 to 19.

Center Names Clinical Chief

The Memorial Hospital Association has announced that Gordon M. Meade, M.D., former executive director of the Trudeau-Saranac Institute, Saranac Lake, N. Y., will become chief of clinical services for the Williamson Memorial Center at Williamson, West Virginia.

The Memorial Hospital Association's hospitals at Pikeville and McDowell, Kentucky, which are now under construction, will be a part of the Williamson group, according to Frederick D. Mott, M.D., association administrator, who made the announcement.

Lexington Doctors Address KSMT

Two Lexington physicians gave talks at the annual convention of the Kentucky Society of Medical Technologists, which met at the Phoenix Hotel in Lexington April 15 and 16. They were Wallace E. Herrell, M. D., consultant in medicine at the Lexington Clinic, who spoke on antibiotic drugs, and Franklin B. Moosnick, M. D., who discussed bacterial infections.

Miss Ruth Robinette of Ashland was named president to succeed Mrs. Katherine P. Muir, Louisville. Jack Phillips of Lexington was named president-elect, Mrs. Martha Pollard of Versailles was elected secretary, and Miss Elizabeth Austin, Louisville, was elected treasurer.

Ky. Doctors Honored at Ann Arbor

Alex J. Steigman, M. D., head of the pediatric department at the University of Louisville School of Medicine, and Murray Lipton, M. D., assistant professor of child health research at the School, were in the front ranks of the evaluation team for the Salk polio vaccine.

Dr. Steigman's and Dr. Lipton's work in the Kentucky Child Health Foundation at the medical school resulted in the discovery of a new and simpler method of testing results of vaccination. The method received national attention when it was announced in March. Dr. Steigman was among a select group of physicians attending the dramatic announcement of success of the vaccine at Ann Arbor, April 12.

Dr. Bentley Honored in Letcher Co.

It was D. V. Bentley Day in Letcher County May 14. The veteran physician, who has delivered more than 5,000 babies in 40 years of service to the community, was eulogized in speeches in Neon, and the town took a holiday in his honor.

There was a prize for the best biography of Dr. Bentley by a school child, prizes for the largest number of children in one family delivered by Dr. Bentley, and prizes for the oldest and youngest of his "babies." Sam C. Quillen, D. D. S., headed the committee planning the celebration.

Pediatricians Hear Dr. Alexander

Hattie Alexander, M. D., New York, addressed the annual meeting of the Kentucky Society for the Advancement of Pediatrics in Louisville, April 21. Dr. Alexander spoke in the afternoon on "Recent Advances in Antibiotic Therapy in Pediatrics" and in the evening on "Bacterial Meningitis."

At this meeting the following officers were elected: Alex J. Steigman, M. D., Louisville, president; Daniel McIlvoy, M. D., Bowling Green, vice president; and Selby V. Love, M. D., secretary-treasurer.

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One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

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1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

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NASHVILLE :—: TENNESSEE

Dr. Campbell is Honored

T. I. Campbell, M. D. was guest of honor at a meeting held at the Lebanon Country Club on April 13. Every practicing physician in Marion and Washington Counties was present to pay tribute to Dr. Campbell's 48 years of service.

The program and the dinner which preceded it were arranged by the Woman's Auxiliary to the Washington County Medical Society. Dr. Campbell, a graduate of the University of Louisville College of Medicine in 1907, has delivered more than 4,500 babies during almost half a century of service.

Tenn. Assembly to Meet in Oct.

The Tennessee Valley Medical Assembly, sponsored by the Chattanooga and Hamilton County Medical Society, will meet Monday and Tuesday, October 3 and 4, at Read House, Chattanooga.

John C. Krantz, Jr., M. D., professor of pharmacology, University of Maryland, will be the banquet speaker on October 3. He will speak on "The Simplicity to Wonder." Elmer Hess, M. D., Erie, Pa., president of the American Medical Association, will be guest of honor. In addition, 15 outstanding guest speakers will address the two-day meeting.

Dues Collection at Record High

The percentage of counties reporting 100% paid-up memberships as of May 1, 1955, was higher than any other year at that time on record, according to Clyde C. Sparks, M.D., Ashland, KSMA president.

Dr. Sparks commended the county medical society secretaries for their efficient efforts and devotion to duty.

Awards for Graduates Available

Awards for graduate training are available to interns and residents up to the amount of $1,000 in the fields of general practice, internal medicine, obstetrics and gynecology, pediatrics and surgery.

Recipients of these awards are picked by the national organizations of these specialties and funds for the awards are provided by the Mead Johnson Company.

Dr. McPheeters Assigned Post

Harold L. McPheeters, M. D., Louisville, was appointed by State Commissioner of Mental Health Frank M. Gaines, M. D., Louisville, as the new assistant in this State department, effective April 1. Dr. McPheeters fills the va-

cancy created a year ago by the resignation of Richard Jarvis, M. D.

Dr. McPheeters, a graduate of the 1948 class of the University of Louisville School of Medicine, will, in addition to other responsibilities, be in charge of training and research projects in the State mental hospitals. Before taking the State post he was assistant psychiatrist at Ellis Hospital, Schenectady, New York.

New KSMA Members Welcomed

The following names have recently been added to the membership rolls of the Kentucky State Medical Association. The Association extends a cordial welcome to these new members:

Shelby Hicks, M. D., New Castle
William J. McGhee, M. D., Alva
Milton O. Beebe, M. D., West Liberty
Charles R. Fisher, M. D., Madisonville
Morris L. Miller, M. D., Louisville
G. L. Smiley, M. D., Louisville
McHenry Brewer, M. D., Louisville
Richard F. Greathouse, M. D., Louisville
Martha Harmon, M. D., Louisville

Income Tax Booklet Available

A booklet entitled, "Federal Income Tax Liability of Physicians," has been prepared by the Law Department of the A.M.A. and is now available. It contains a reprint of four articles regarding income tax liability which have appeared in recent issues of the Journal of the A.M.A.

Any KSMA member interested in obtaining a copy, should get in touch with the Headquarters Office.

Foundation Names Chairmen

Cooley L. Combs, M. D., Hazard, has been elected district chairman for Perry, Knott, Breathitt, Leslie and Letcher Counties of the Kentucky Medical Foundation.

County chairmen include: Lawrence D. Gorman, Hazard, Perry; D. G. Barker, M. D., Hindman, Knott; Carl Pigman, M. D., Whitesburg, Letcher; and Mrs. Marie R. Turner, Jackson, Breathitt.

Byron Lewis, M.D., has closed his office in Elizabethtown to report for duty with the armed forces at Gaunter Air Force Base, Alabama.

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KENTUCKY MENTAL HEALTH LAWS

(Continued from page 500)

treatment. Several other sections of the statutes were amended in order to clarify the family's responsibility to pay board should they be financially able to do so, after the patient's admission.

Other Clarifications

In addition to these additions mentioned above, there was a series of miscellaneous changes which were designed to clarify certain sections and to repeal certain other obselete sections.

a. Clarification of the section dealing with restoration of citizenship after discharge from commitment.

b. The sections dealing with the release and trial visits of patients were shortened and clarified.

c. Several archaic sections relating to training schools were repealed since they were largely restrictive at the present time.

d. Clarification of the respective jurisdictions of the Department of Mental Health and the Department of Welfare in regard to mentally ill and mentally defective persons and in regard to the operation and administration of the state mental hospitals and the Kentucky Training Home.

e. A section requiring the segregation of races in different buildings was repealed.

The proposal to commit patients to private psychiatric hospitals was not presented to the legislature, since it was felt that the Department did not have personnel to properly supervise this program, and there was no prospect of funds by which such personnel could be obtained. A new law to create a Commission on Alcoholism, prepared as a result of a study by the Legislative Research Commission, unfortunately failed to pass.

Admittedly, our new laws are not perfect. Problems about their interpretation have already arisen. Periodic reassessments should be made, in order that they may be kept in line with modern psychiatric thinking. However, we do not believe that a revision should be returned to the legislature with regularity every two years, since we could justifiably be accused of not being able to make up our minds. For the immediate future, the passage of the laws outlined completes the legisla-

tive program of the Department of Mental Health. We feel that our primary goal for the next two years is to tell our story to the people, in order that they may know our needs and support the appropriation of additional funds for an effective system of mental health hospitals and clinics in Kentucky.

A PHYSICIAN LOOKS AT HOUR GLASS

(Continued from page 504)

illustration of what a Rural Health Council can do? I wonder if some day some voice will say to the individuals who work in the Rural Health Councils, "Well done, my good and faithful servants, enter . . .", or, "Even though ye have done it unto the least of these, ye have done it unto me."

There seem to be four main divisions of our rural health problems and all of these four must be defeated before we can successfully utilize our health resources. They are:

UNIMPORTANCE, or acting as if what you did is of no importance. "Let George do it." What difference does it make if the school children don't get a good diet? My kid's going to get it. Someone else will do something about it, so why should I worry?

FATALISM. Believing that man cannot control his environment. In other words—if I may use the statement "The health as we know it in the rural areas was good enough for my grandfather, so it's good enough for my children."

SURRENDERING EN MASSE, and forgetting about the greatness of our nation, and its founding on God, or accepting a mass hysteria, or of letting a centralized government spoon-feed us. Each individual should have in his hands his life, and not be totally at the mercy of the State.

ACCEPTING FANATICISM. In other words, accepting some of the fantastic ideals of other individuals who do not think clearly. Or accepting the idea that nothing can be done about it. Speak up! Make yourself heard! Let's have stewardship Sundays, stewardship programs in which the minister talks on stewardship of the soul, the physician talks on stewardship of the body, the banker talks on stewardship of money, and the lawyer talks on stewardship of the family. In other words, let's realize that you cannot separate the mind, the physical body and the soul—they are all joined together. Let's not stand on the Bible, as I'm sure atheists and infidels do.

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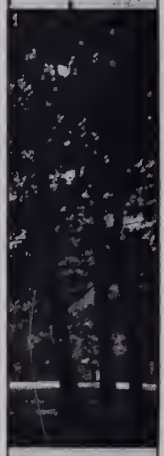

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Let's not put the Bible on our head and believe, as some people do, that God will take care of all our needs, and that we don't have to do anything about our health problems. But rather, let's put the Bible and what it stands for under our arm and take a way of life accepting the fact that we are our brother's keeper. And remembering that when we do something for another person, some of that good will return to us. Then to paraphrase Edgar Guest—

When life is done, we'd like to feel
That we have filled a needed post;
That here and there we've paid our fare
With more than idle talk and boast;
That we had taken gifts Divine—
The breath of life and manhood fine,
And tried to use them now and then
In service for our fellow men!

CHOLECYSTOGRAPHY, A HELPFUL PROCEDURE

(Continued from page 506)

use in children, in the post-cholecystectomy syndromes, in suspected tumors about the bile ducts, and when oral cholecystography has been unsuccessful.

While enthusiastic reports have appeared on the accuracy of the newer intravenous method, sufficient trial has not been given to establish its safety. It has apparently not resulted in severe toxic or allergic reactions if the precautions advised are followed. Techniques as to the time interval after injection before the films are made are still in the process of being explored. Some Roentgenologists have been quite enthusiastic about it, while others have expressed disappointment in the information they have obtained. It must be remembered that cholecystography was first begun by intravenous dyes, but abandoned for the oral method because some deaths resulted from their use. The high iodine concentration in the present intravenous dye may yet prove that its safety is less than now supposed. The usefulness of an already important diagnostic method is, at any rate, being further extended.

SAM A. OVERSTREET, M. D.

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News Items

Gradie R. Rowntree, M.D., Louisville, was elected president of the Louisville Automobile Club by its board of directors on May 10. Dr. Rowntree is president of the Jefferson County Medical Society.

Rudy Wells, M.D., a graduate of the University of Louisville School of Medicine in 1946, opened offices for the practice of medicine in Middlesboro on April 4. Dr. Wells interned at the Swedish Hospital in Seattle, Washington. He recently received his discharge from the U.S.A.F., after having served as a surgeon in Japan.

W. Gerald Edds, M.D., will close his practice in Calhoun on July 1. He plans to do post-graduate work in Birmingham. Dr. Edds, a native of McLean County, has been practicing medicine in Calhoun for four years. He graduated from the University of Louisville School of Medicine in 1950 and interned at the U. S. Naval Hospital at Portsmouth.

Lewis Clayton, M.D., and **Raymond DePue, M.D.,** have opened private practices at the Evans Hospital in Middlesboro. Both doctors are graduates of the University of Tennessee Medical School, Dr. Clayton being a native of Fort Lauderdale, Florida, and Dr. DePue coming from Knoxville, Tennessee.

Millard C. Loy, M.D., reopened his office the 17th of April at Columbia, Kentucky. Dr. Loy, a graduate of the University of Louisville School of Medicine in the class of 1946, has just been separated from a two-year tour of duty in the Armed Forces.

Henry C. Jasper, M.D., oldest physician in Madison County, celebrated his 90th birthday on April 18. Dr. Jasper, who retired from active practice five years ago, still holds the title of chief surgeon of the local L & N Railroad division. He took his medical training at the Louisville School of Medicine and at the old Jefferson Medical College in Philadelphia. During World War I, Dr. Jasper was chief medical examiner for the local draft board. A big birthday cake marked his birthday celebration, in which friends and neighbors joined.

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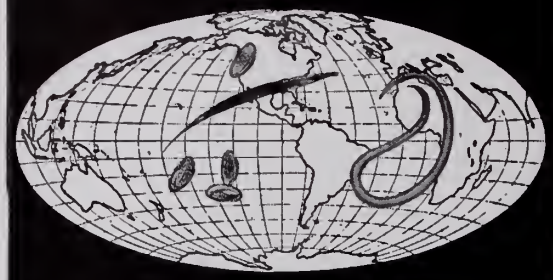

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Thomas H. Biggs, M.D., assistant medical director of the State Tuberculosis Hospital at London for the past 21 months, has been named superintendent of the hospital, following the resignation of Jacob Heinrich, M.D. Dr. Heinrich has returned to his home at Battle Creek, Mich.

Ralph C. Morris, M.D., formerly of New York, has taken over the operation of the Lattimore Clinic in Louisville. Dr. Morris, a 1950 graduate of the Howard University College of Medicine, Washington, took postgraduate training in internal medicine at Howard and at the New York University Bellevue Medical Center. J. A. C. Lattimore, clinic founder and former president of the National Medical Association, is retiring due to ill health.

George W. Ballou, M.D., is now practicing in Maysville, following completion of service with the Army Medical corps. A graduate of the University of Louisville School of Medicine, Dr. Ballou served his internship at Christ Hospital in Cincinnati.

E. E. Ramey, M.D., a graduate of the University of Louisville School of Medicine in 1949, has announced his resignation as city physician for Paducah. Dr. Ramey has held the position since May 1, 1954. No replacement has yet been named.

Thomas J. E. O'Neill, M.D., Philadelphia thoracic and cardiac surgeon, spoke April 15 at the University of Kentucky's Memorial Hall on "Surgery's New Frontier - the Heart." The program was sponsored by the University's chapter of Sigma Xi. Dr. O'Neill, assistant clinical professor of surgery at Woman's Medical College of Pennsylvania, spoke at the Kentucky State Medical Association's Annual Meeting last September.

W. A. Litzenberger, M.D., currently serving as Lieutenant Commander in the U. S. Navy, will join the Elizabethtown Clinic following his discharge from the Navy. A native of Bethlehem, Pa., Dr. Litzenberger graduated from Harvard Medical School in 1944. He interned at Geisinger Memorial Hospital, Danville, Pa., and took his residency training in internal medicine at St. Luke's Hospital, Bethlehem. Following that he was resident in medicine in Kennedy General Hospital, Memphis, and later graduated from the Pennsylvania Graduate School of Medicine in Philadelphia. Prior to his service in the Navy, he returned to Kennedy Hospital for three years' training in his sub specialty fields of chest and heart diseases.

William R. Gabbert, M.D., and **J. Edmund Bickel, M. D.,** both of Owensboro, have been named members of the American Board of Pediatrics. Dr. Gabbert, a graduate of Bowman-Gray School of Medicine, Winston-Salem, N. C., in 1946, took his post graduate training in pediatrics there and at the Baptist Hospital in Winston Salem. He began his practice in Danville, Ky., in January, 1952, and moved to Owensboro in August, 1953. Dr. Bickel, a graduate of the University of Louisville School of Medicine, took his post graduate work there and at Children's Hospital in Louisville from 1948-1950. He began his practice in Owensboro in May, 1951.

Bernard I. Popham, M.D., following his discharge from the Navy, will open an office in Louisville in June. Dr. Popham graduated from the University of Louisville School of Medicine in 1947.

James C. Leary, public relations representative of the Chicago and Illinois Medical Societies, died of a heart attack during a meeting of the Chicago Medical Society in the Palmer House. He was past president of the National Association of Science Writers.

R. W. Fiddler, M.D., of Ashland, plans to open an office in Flemingsburg around the middle of June. Dr. Fiddler, who will complete his internship at the Good Samaritan Hospital, Lexington, on June 1, is a graduate of the University of Louisville School of Medicine.

Eugene L. Snowden, M.D., who has been serving as flight surgeon at Malden Air Base, Missouri, is returning to Winchester to resume the practice of medicine following his discharge from service. Dr. Snowden graduated from the University of Louisville School of Medicine in 1947.

Clifton Himmelsbach, M.D., formerly assigned to the research branch of the U. S. Public Health Service Hospital at Lexington, Ky., has been named head of the service's hospital system. Dr. Himmelsbach, a native of Philadelphia, has served at the Public Health Service headquarters in Washington since 1947.

Jesse M. Hunt, Jr., M.D., following his release from active duty with the Navy, plans to open an office for general practice at Wickliffe on July 1. Dr. Hunt graduated from the University of Louisville School of Medicine in 1949.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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In Memoriam

A. G. CALDWELL, M. D.

Lawrenceburg

1866 - 1955

Dr. Caldwell, 88, a retired physician, died at his home in Anderson County on April 13, 1955, following a long illness.

A graduate of Louisville Medical College in 1893, Dr. Caldwell had practiced in Oklahoma for some years.

WILLIAM B. MOORE, M. D.

Cynthiana

1869 - 1955

Dr. William B. Moore, 86, retired physician in Cynthiana, died April 25 at Harrison Memorial Hospital after an illness of several months.

A native of Bracken County, Dr. Moore graduated from the Medical Department of the University of Louisville in 1894. He began practicing in Harrison County that same year, moving to Cynthiana in 1907.

Dr. Moore served as president of the Harrison County Medical Society for several terms and was the society's secretary for 33 years. He was also active in the Kentucky State Medical Association, in which he served as treasurer for many years.

JOHN R. FERGUSON, M. D.

Providence

1892 - 1955

Dr. Ferguson died at the age of 63 on April 4. He had practiced in Providence since 1929.

He was a graduate of the Meharry Medical College in the class of 1921, and had been a practicing physician for more than 40 years.

SAMUEL O. GRIGGS, M. D.

Newport

1878 - 1955

Dr. Griggs died at the Newport Baptist Rest Home on April 1. He was 82 years of age.

He had practiced medicine in Northern Kentucky for 55 years and was health officer for the city of Dayton for many years. He graduated from the Medical College of Ohio in 1896.

COUNTY SOCIETY REPORTS

WARREN-EDMONSON-BUTLER

The Warren-Edmonson-Butler County Medical Society held its regular monthly meeting on Tuesday, April 12, 1955, with John Y. Barbee, M.D., president, presiding.

The society passed a resolution establishing a volunteer priority rating in the distribution of poliomyelitis vaccine with the physicians agreeing to use their supply in the more susceptible age groups. It was also agreed to immunize the first and second grade school children in the county. A committee was appointed to draw up the schedule.

The program for the evening was a film on streptoccocal infections.

Charles M. Francis, M.D., Secretary.

PIKE

The Pike County Medical Society held its regular monthly meeting on March 15, 1955, in Pikeville, with 26 members attending. The meeting was called to order by R. W. Allen, M.D., president.

Duane C. Jones, M.D., from the State Tuberculosis Hospital, Ashland, gave the scientific program on "Differential Diagnosis of Chest Disease," limiting his discussion to chronic pulmonary disease. His talk, centering around tuberculosis and lung cancer, were illustrated by chest X-rays.

Representatives from the U. S. Public Health Service Research Laboratory in Prestonsburg, gave a report of their findings in the study of infantile diarrhea and intestinal parasites. They asked for permission to give a single dose of "Syrup of Piperazine" to certain cases as a research project and were given the sanction of the society.

G. N. Combs, M.D., Secretary

SHELBY-OLDHAM

The Shelby-Oldham County Medical Society met Thursday, April 26, 1955, at the Stone Inn, Simpsonville. Twenty-two members were in attendance.

Walter S. Coe, M.D., Louisville, spoke on the subject, "Diseases of the Liver."

B. B. Baughman, M.D., councilor for the 7th District and chairman of the council, made an announcement concerning the 7th District meeting in Frankfort on June 2.

C. C. Risk, D.D.S., Secretary

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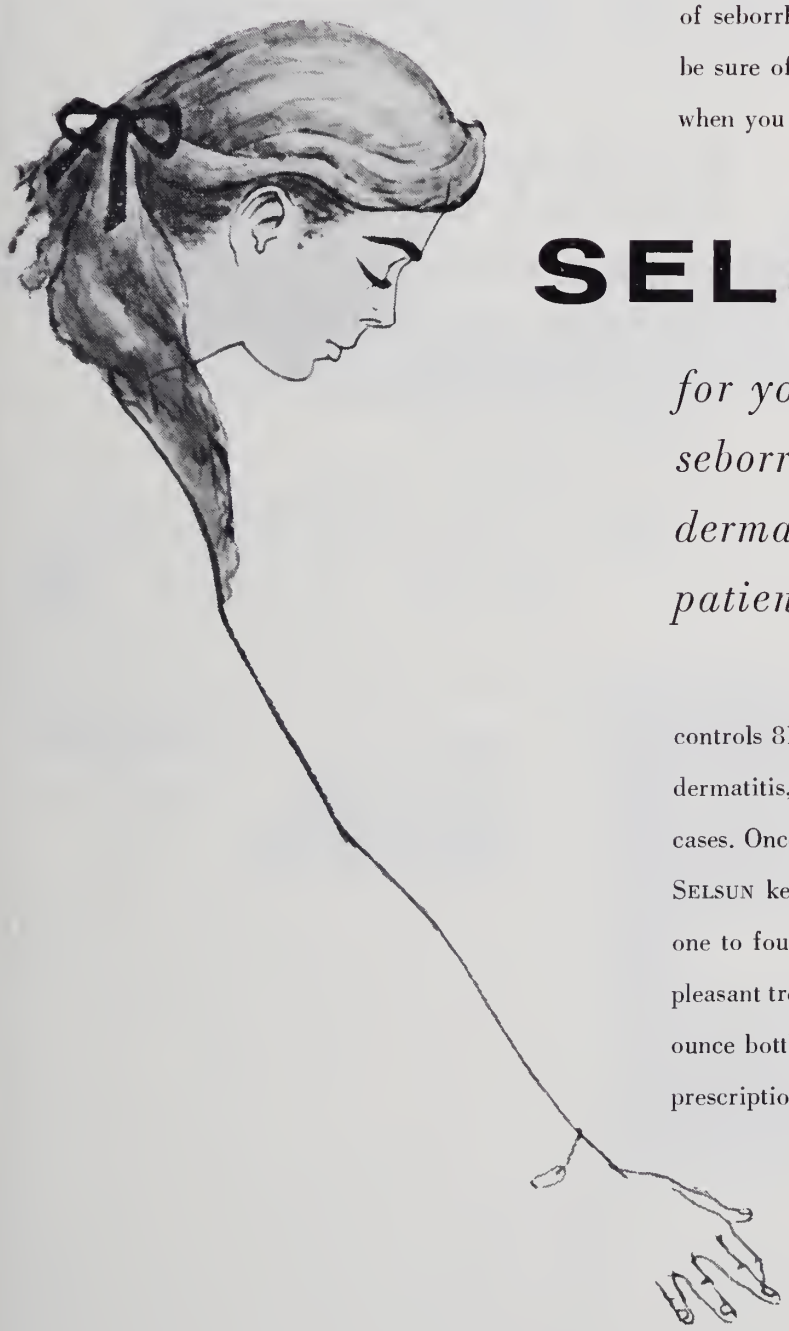

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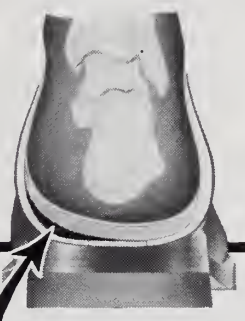

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MONDAY, OCTOBER 3, and TUESDAY, OCTOBER 4, 1955

MONDAY MORNING

Registration - 7:30 - 9:00 a. m.

Philip Thorek, M.D., Chicago, Illinois—"Intestinal Obstruction"

Edgar Hull, M.D., New Orleans, La.—"Emergency Use of Corticoids and Corticotropins"

George Pack, M.D., New York, N. Y.—"Carcinoma of the Breast"

Robert B. Greenblatt, M.D., Augusta, Ga—"Use and Abuse of Endocrines in General Practice"

Arthur Curtis, M.D., Ann Arbor, Mich.—"Cutaneous Manifestations of Systemic Disease"

Lunch: 12:00 noon - 2:00 p. m.

MONDAY AFTERNOON

Brian Blades, M.D., Washington, D. C.—"Traumatic Injuries of the Chest"

Harry Bacon, M.D., Philadelphia, Pa.—"Anal and Rectal Lesions and their Treatment"

Philip Thorek, M.D., Chicago, Illinois—"The Peptic Ulcer Problem"

Waldo E. Nelson, M.D., Philadelphia, Pa.—"Pediatric Care by the General Practitioner"

QUESTION AND ANSWER PERIOD—Dr. Harry Bacon, Moderator

COCKTAIL HOUR: 5:30 - 6:30 p. m.

BANQUET: 7:00 p. m.—Speaker, Dr. John C. Krantz, Jr., Professor of Pharmacology, University of Maryland, "The Simplicity to Wonder". Honor Guest, Dr. Elmer Hess, Erie, Pa., President of American Medical Association.

TUESDAY MORNING

Alton Ochsner, M.D., New Orleans, La.—"Cancer of the Lung"

Thomas J. Dry, M.D., Rochester, Minn.—"Coronary Artery Disease"

Nicholas J. Eastman, M.D., Baltimore, Md.—"Complications of Pregnancy"

Elmer Hess, M.D., Erie, Pa.—"Management of Ureteral Calculi"

Edgar Hull, M.D., New Orleans, La.—"Manifestations and Treatment of Extra-intestinal Amebiasis"

LUNCH: 12:00 noon - 2:00 p. m.

TUESDAY AFTERNOON

J. Spencer Speed, M.D., Memphis, Tenn.—"Diagnosis and Treatment of Backache"

Sara Jordan, M.D., Boston, Mass.—"The Irritable Colon"

Charles A. Doan, M.D., Columbus, Ohio—"The Diagnosis and Treatment of Acute Leukemic States"

Alexander Brunschwig, M.D., New York, N.Y.—"Carcinoma of the Cervix."

QUESTION AND ANSWER PERIOD—Dr. Alton Ochsner, Moderator

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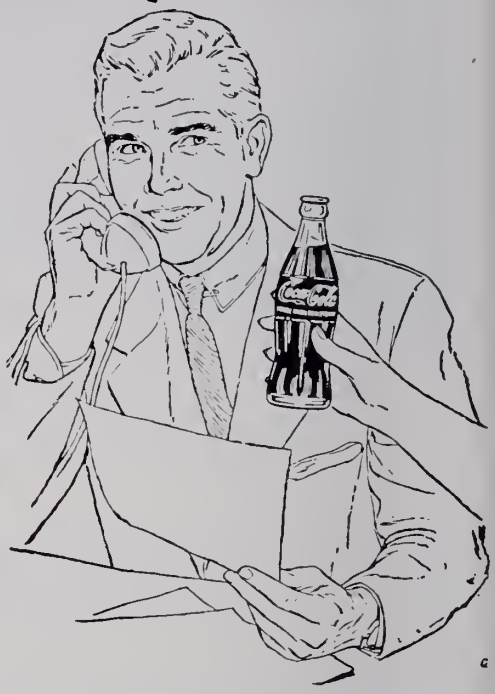

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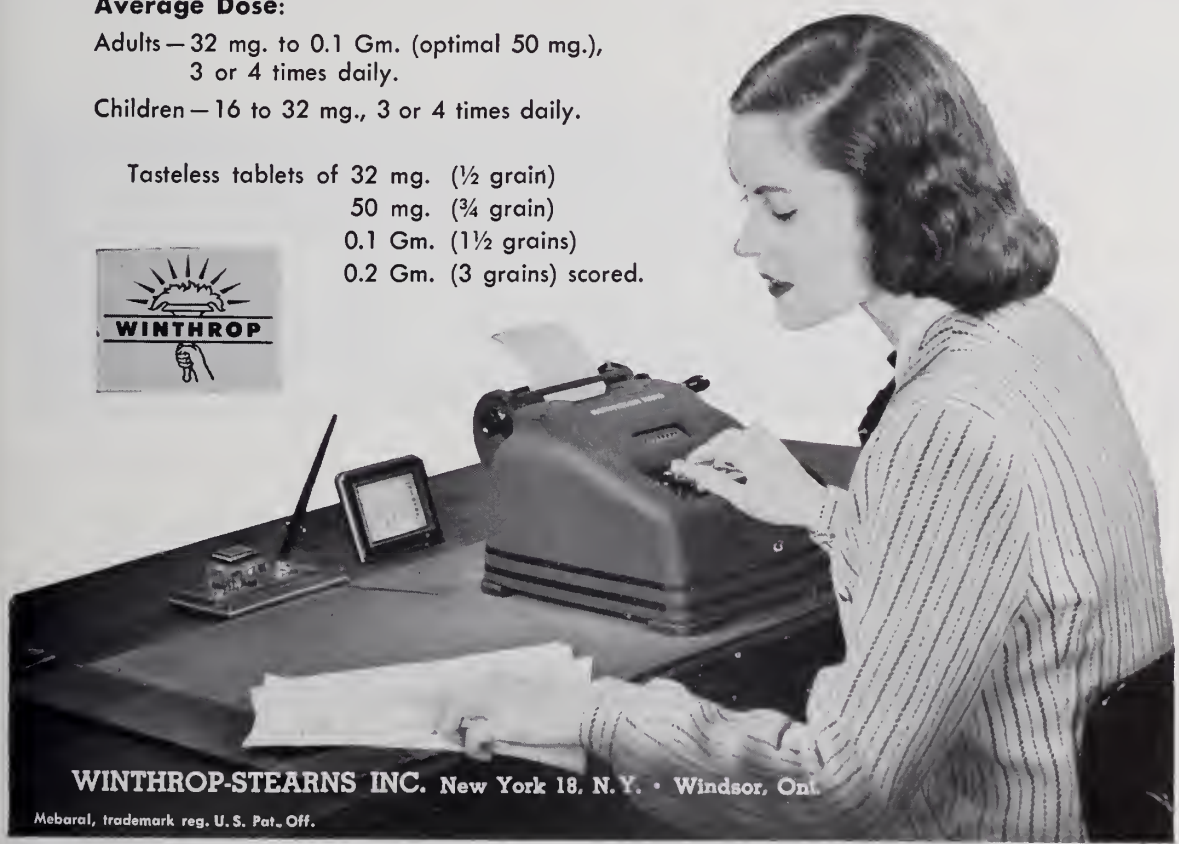

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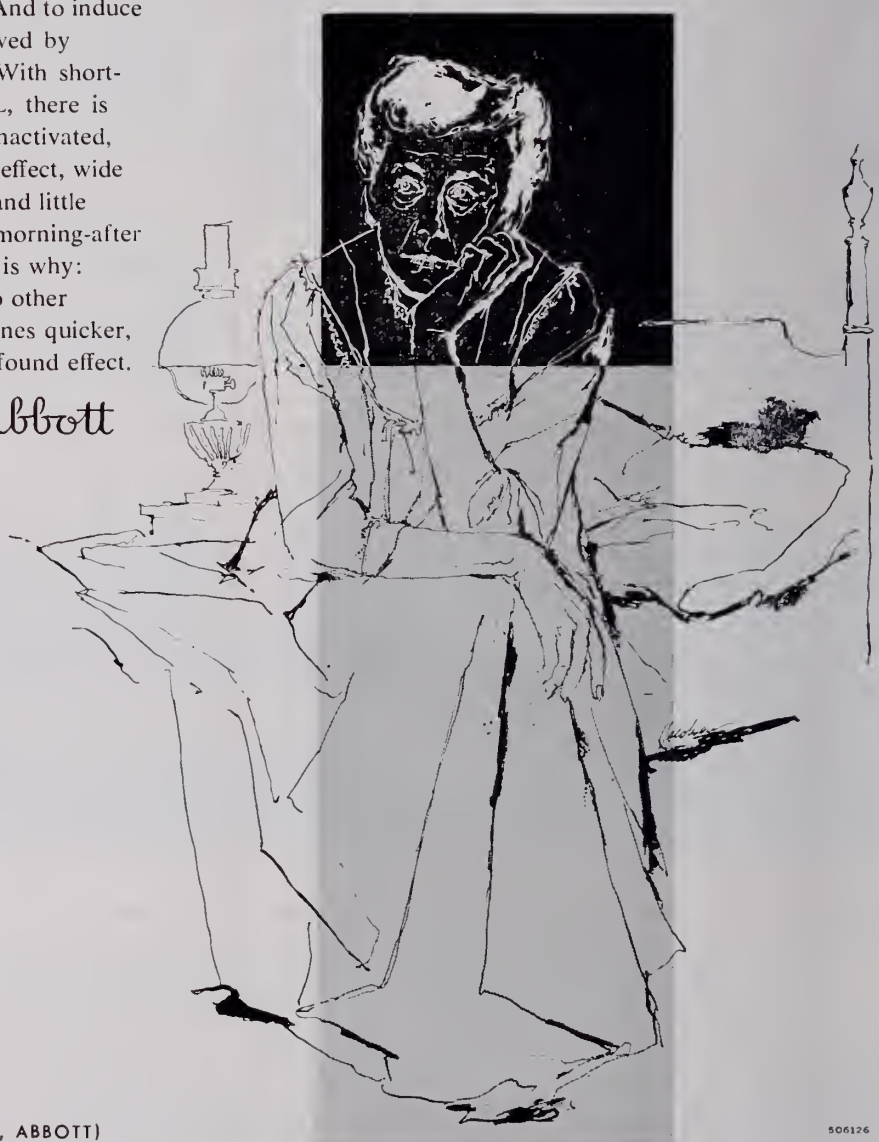

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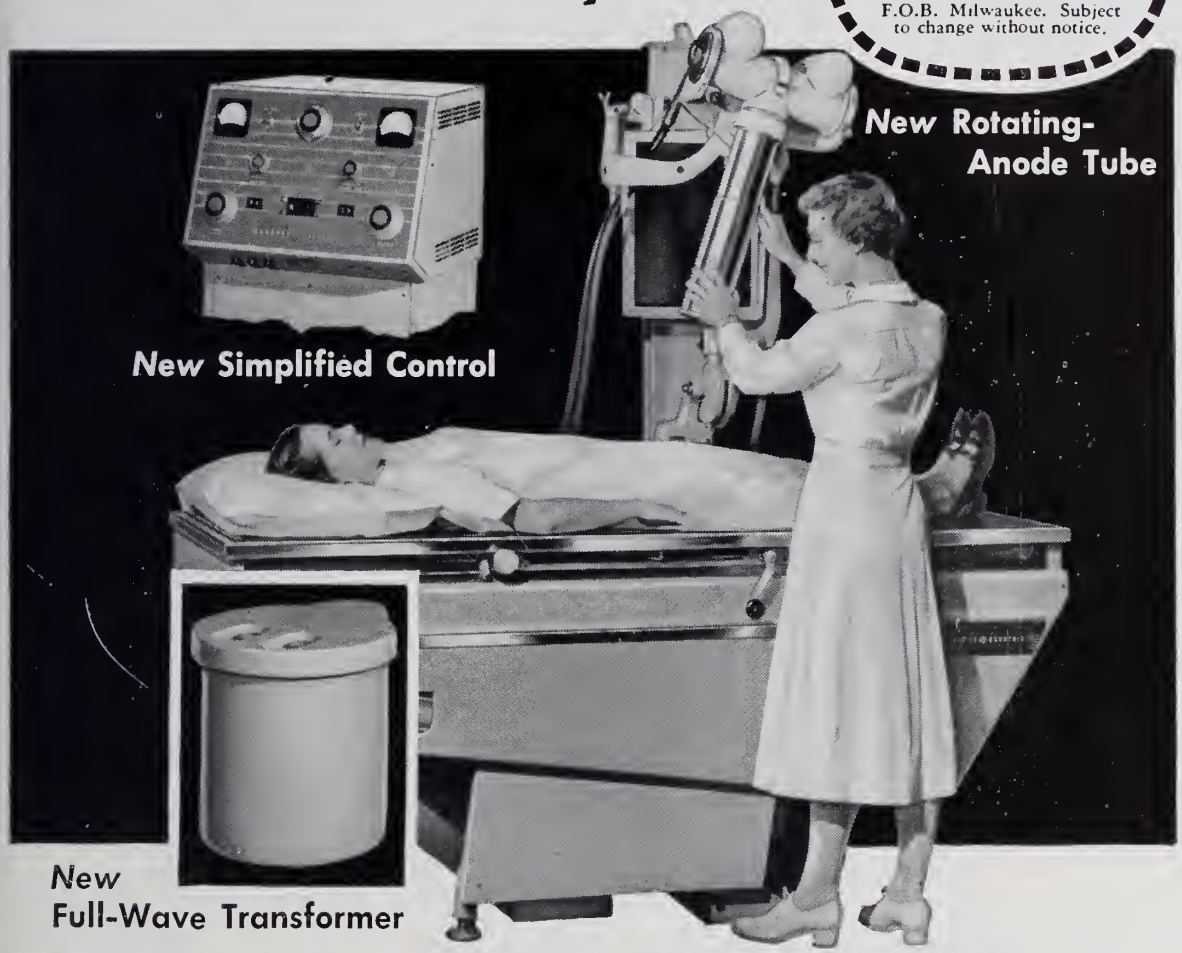

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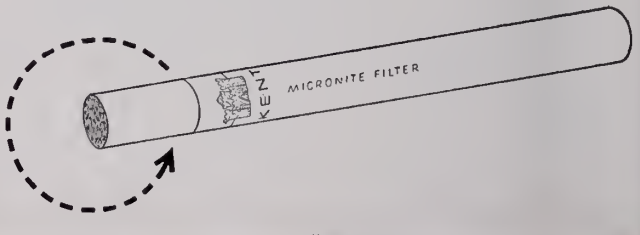

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(1) Payne, R. W.; Shetlar, M. R.; Farr, C. H.; Hellbaum, A. A., and Ishmael, W. K.: J. Lab. & Clin. Med. 45:331, 1955. (2) Bunim, J. J.; Williams, R. R., and Black, R. L.: J. Chron. Dis. 1:168, 1955. (3) Halbraak, W. P.: M. Clin. North America 39:405, 1955.

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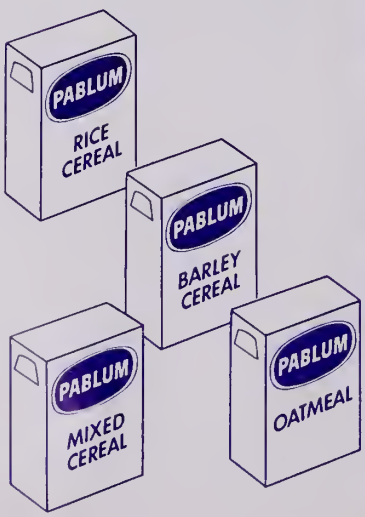

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VOL. 53 JULY, 1955 NO. 7

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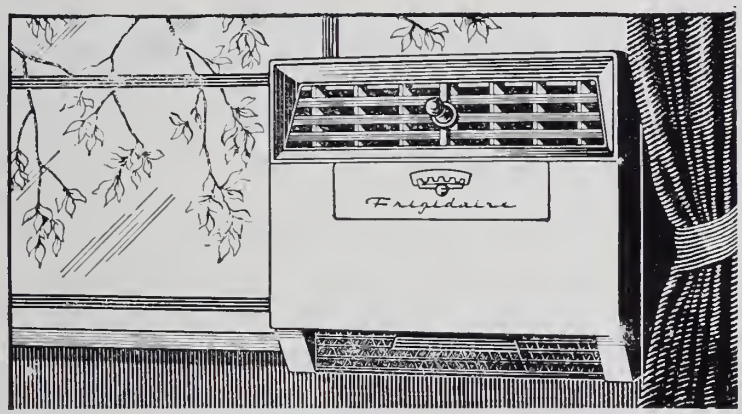

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President's Page

An observation worthy of note is the increasing interest and serious participation of the young members in the affairs of their medical organization. It has been obvious at the various councilor district meetings that their concern is genuine and that their talents are available. That they are being utilized is a healthy sign.

It has not been too many years since a medical organization such as our county and state associations seemed remote and far removed from medical students and medical schools. This is diminishing rapidly in Kentucky, and the recent Senior Day sponsored by your association will not only be a service to the student in bridging the gap from student to practitioner, but will help him to find an earlier home in organized medicine.

The relationship between medical associations and teaching centers is better than ever before, and the Kentucky State Medical Association expresses thanks to the University of Louisville School of Medicine authorities for their cooperation.

The accent on youth is essential if we are to successfully accept our responsibility of leadership in solving our pressing problems. Those of indigent care, care of the chronically ill, etc., cannot be solved without a long range planning program, and the burden of the work will eventually pass to the now young men. We must assist them wherever possible, planning with them and for them. The changing trends in medical practice make this perhaps more imperative then ever before in my memory.

C. C. Sparks

PRESIDENT

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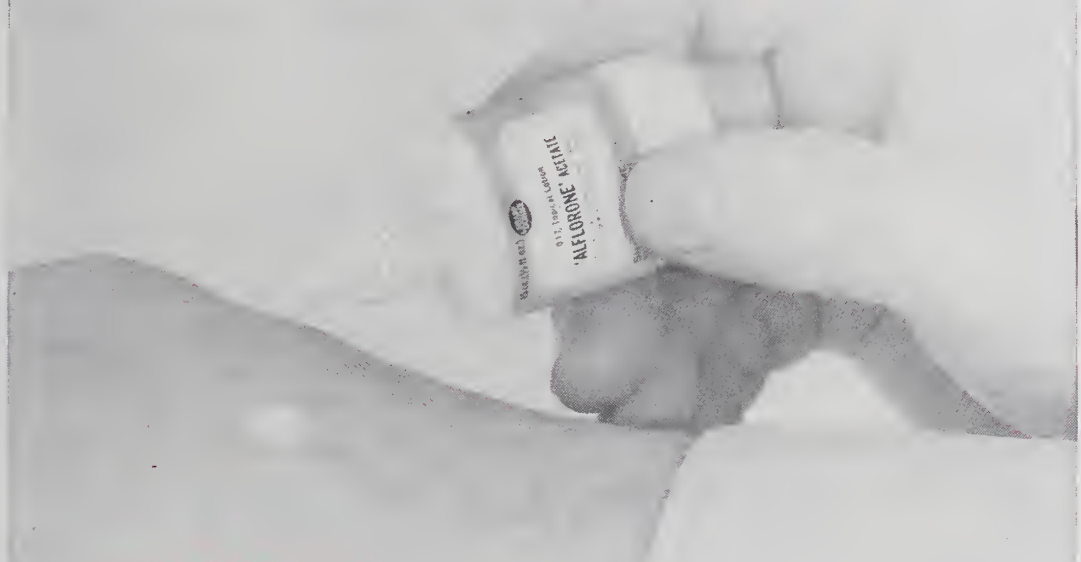

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A TEXTBOOK OF PHYSIOLOGY: Edited by John F. Fulton. Seventeenth Edition, 1955, W. B. Saunders Co., Philadelphia; 1275 pages; $13.50.

It is a commentary upon the inertia of teachers that textbook publishers find it profitable to publish completely new books, under new authorship, as later editions of standard texts. **A Textbook of Physiology** was first published by Saunders in 1905, under the authorship of Dr. William H. Howell. During Dr. Howell's lifetime this book went through fourteen editions, each painstakingly revised and brought up to date by the author. More than any other text, it set the standards for instruction in the medical schools of the country. Since Howell's death, three editions have been published under the joint authorship of a group of specialists, with Dr. John F. Fulton as Editor. Nothing remains of Howell's text except the title and the preface written for his first edition.

Group authorship of textbooks in broad medical subjects is probably the best way to achieve authoritative coverage of the whole field. In the preface to his last revision, in 1940, Dr. Howell admitted that only by drawing heavily on reviews published by specialists "is it possible for a single writer to keep reasonably informed regarding the many changes constantly taking place along the wide front of physiological research." But such panel efforts have certain shortcomings as textbooks. Unless the chief editor actually re-writes all the sections, the reader will be aware of abrupt changes in style, in approach, and in emphasis, as he moves from section to section. This is perhaps the chief objection to the present **Textbook.** Among the thirty contributors, only ten are actively engaged in teaching courses in physiology to medical students. One gets the impression that the authors are going about their several affairs in their separate ways, without any unified effort to give the student a working knowledge of physiology as a part of medicine. Some of the sections, notably the first one, on the Principles of Nervous Activity, are so far removed from the kind of physiology that the physician deals with, as to constitute a poor introduction to the subject.

The allotment of 500 pages to the physiology of muscle, nerve, the nervous system and the sense organs, while only 16 pages are devoted to blood clotting, and 68 pages to the physiology of the digestive system, seems to reflect editorial bias rather than a realization of relative importance in general medicine.

With one or two exceptions, the individual sections represent current physiological opinion, and may be used with profit as authoritative reviews. There is adequate documentation in the form of references to the current literature at the end of each chapter.

Hampden C. Lawson, M. D.

LIVING WITH A DISABILITY: by Howard A. Rusk, M. D., and Eugene Taylor; The Blakiston Company, Inc., New York; 207 pages; $4.00.

This is an excellent, concise, convenient, and graphical guide for the handicapped individual. The authors have succeeded in conveying ideas in understandable language. An outstanding feature is its philosophy stressing a logical approach to "doing with what you have left." The importance of the handicapped person being independent and the necessity of continuous prolonged practice to accomplish certain feats is well related.

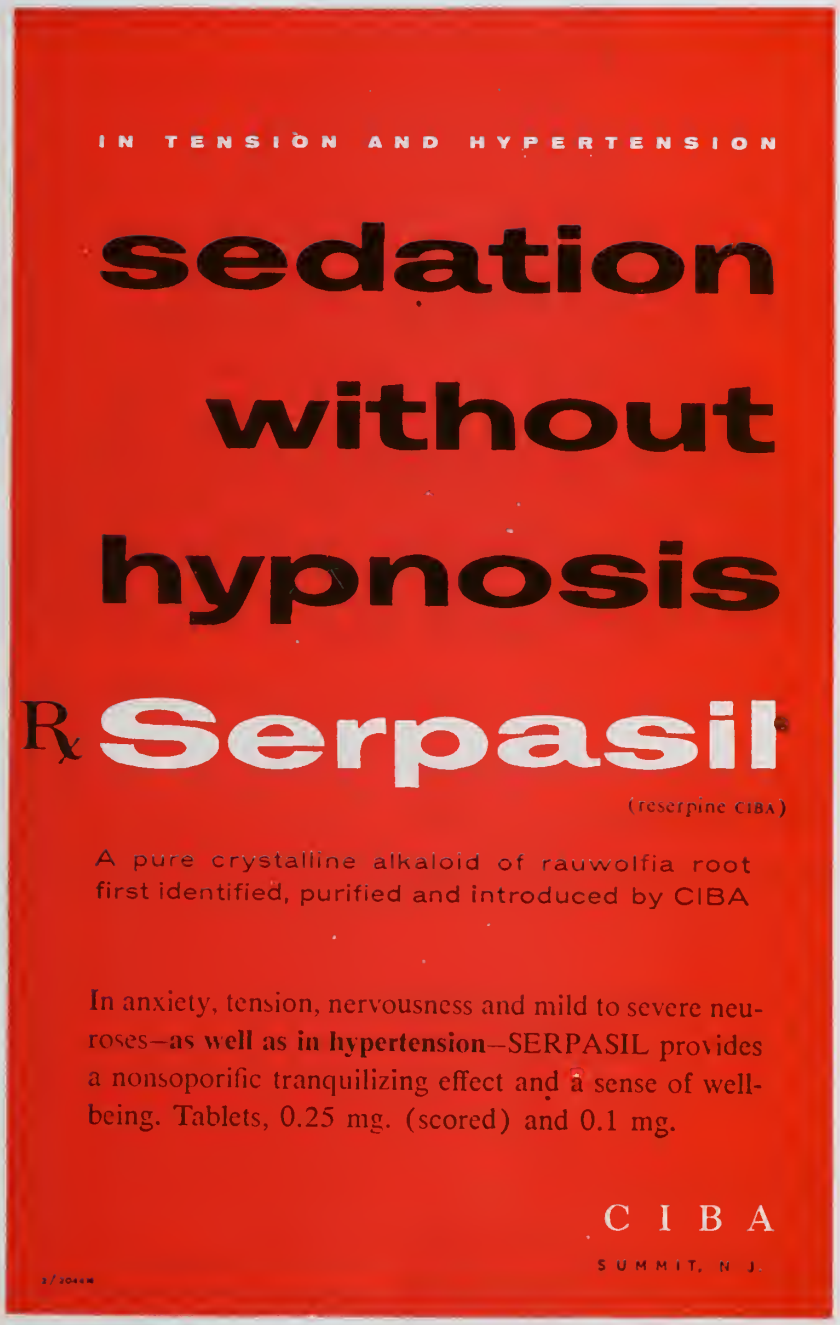
Some of the most difficult problems in helping the handicapped attain independence are approached. For instance, the advice to the family and the limitations and necessity of the helpful friend are sound and logical. The description of and advice concerning gadgets is very stimulating and should lead the handicapped person to greater goals.

The 275 photographs and illustrations used are excellent in detail, and each one of the former is worth a thousand printed words. They illustrate the materials, construction and use of gadgets by the handicapped and warrant much detailed study. The cross section of problems of feeding oneself, keeping up personal appearance, toilet care, home making, transportation, and recreation represents a highly selective choice of the great number of diverse activities of daily living that are necessary for the handicapped to learn in achieving independence.

This book will help the handicapped individual help himself.

Rex O. McMorris, M. D.

(Continued on page 558)



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IN THE BOOKS

(Continued from page 556)

CURRENT THERAPY 1955. Latest approved methods of treatment for the practicing physician: Edited by Howard F. Conn, M. D.; W. B. Saunders Co., Philadelphia, pp. 692; $11.00.

This compendium of methods of treatment as carried out by various qualified physicians includes a multitude of subjects from "Abdominal Pregnancy" to "Zigadenus Venenosus, poisoning from." The general practitioner will find that this handbook furnishes a sound guide to competent therapy.

Where complex and controversial subjects are involved more than one author is called upon. For the most part, the fault of vague cataloguing of optional drugs of questionable usefulness, a fault of many text books, is avoided. The names and academic positions of the authors are given. A roster of drugs mentioned in the text is appended with trade names, council accepted names and manufacturer. Subjects and authors are adequately indexed. The scholar or the specialist might wish for a bibliography which is lacking. This does not, however, impair the practical usefulness of the work.

No adverse criticism could be made of the choice of consulting editors or authors, all of whom are competent authorities in their various fields. The rapidly changing kaleidoscope of modern pharmacology and therapy of many diseases, the lack of effective treatment for some and the well established treatment of others cause one to wonder if a handbook of this magnitude would not achieve greater usefulness and flexibility at less expense if published in loose-leaf form.

Thornton Scott, M. D.

BOOKS RECEIVED

"Pomp and Pestilence, Infectious Disease, Its Origins and Conquests": Ronald Hare, Professor of Bacteriology at London University; Philosophical Press, New York; 224 pages; $5.75.

"Fluoroscopy in Diagnostic Roentgenology": Otto Deutschberger, M. D.; W. B. Saunders Company, Philadelphia; 771 pages.

"Bickham-Callander Surgery of the Alimentary Tract," volumes I, II and III: Richard T. Shackelford, M. D., Assisted by Hammond J. Dugan, M.D., W. B. Saunders Company, Philadelphia; $60.00 per set.

"Should the Patient Know the Truth": edited by Samuel Standard, M. D., and Helmuth Nathan, M. D.; Springer Publishing Company, New York. $3.00.

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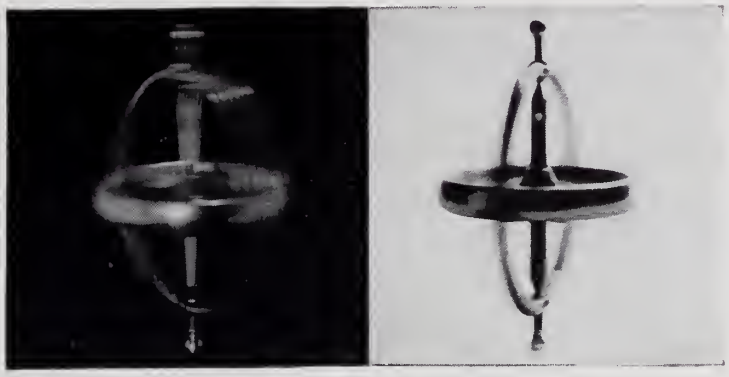

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WASHINGTON NEWS DIGEST

Washington, D. C.—This Congress appears to have established a record for the introduction of medical legislation—but unless something unusual happens and happens fast there will be no record set for laws passed.

With the summer well along, and tentative adjournment just a few weeks off, Congress had not yet revived its interest in medical bills. Most of the measures that were offered in January and February, to the accompaniment of hopeful speeches by their sponsors, have been allowed to lie undisturbed in committee files. In some cases hearings were held, where persons and organizations vitally interested could give enthusiastic testimony. Very few bills indeed got farther than that in the first six months of the session.

One reason is the close balance in Congress, and the reluctance of either party to get behind bills offered by the other, and which might have appeal to the public in the 1956 year. Another is worry over putting the federal government still deeper into the red in a year of prosperity, if not of boom.

Also, key committees for weeks were preoccupied with various bills on Salk vaccine, its control and its cost—weeks when the committees otherwise might have worked on, and possibly reported out, other less controversial health bills. A specific example is the Senate Labor and Welfare Committee. This committee was about ready to report out a House-passed bill for a national survey of mental health problems when it found itself deeply mired in the Salk situation. The mental health bill still is likely to be enacted, but the long delay didn't help much.

Another bill, early in the session regarded as about certain of enactment, calls for the establishment of a voluntary, contributory system of health insurance for federal civilian employees. After a year's study of the complications involved, a special task force prepared and made public the administration's program in January. The expectation was that a bill to carry out the plan would be offered in a few weeks at the most, and would be passed in a few months.

But it didn't work out that way. The administration decided that it couldn't press for these medical benefits (U.S. would pay about one-third of insurance premiums) until the extent of a general U.S. pay raise had been fixed by Congress. So it was June before this U. S. employee health insurance bill was even sent to Congress, and then the administration was in no rush to have it passed.

Troubles also beset the Defense Department's bill to extend the doctor draft act another two years. Although the extension was strongly opposed by both the American Medical Association and the American Dental Association, the House Armed Services Committee accepted the Defense Department's arguments and voted out the bill, 24 to 0.

Ordinarily such a committee vote would have sent the bill sailing on through the House and to the Senate. But not this time. Chairman Howard Smith (D., Va.) of the House Rules Committee lectured the Armed Services Committee and the Defense Department for not making an effort to solve the doctor problem by some other means. There was consequently a delay before floor action—not fatal, but a delay.

Some bills, once considered important, were effectively ignored by Congress. One was the Eisenhower-Hobby plan for reinsurance of health insurance groups, defeated last year. The administration tenaciously defended it, but the committees weren't enough impressed to schedule hearings during the first six months of the session.

The administration bill for federal guarantee of construction loans for hospitals and clinics stirred some Capitol Hill interest but no hearings have been held. Then came all the bills on polio vaccine, and this measure also was put on the shelf.

A bi-partisan bill for U.S. grants for constructing and equipping medical research facilities travelled about the same course; hearings, a high degree of enthusiasm from medical researchers, confidence that the plan would go through—then no more action.

For a time Senator Hill (D., Ala.), the key Senator on health bills, was determined to put through his bill for federal aid for building medical schools. When hearings were held the bill did not appear to arouse opposition from any quarter, yet it was pushed farther and farther to the rear.

Because this is only the first session of the 84th Congress, none of these bills will be irretrievably lost even if not passed before adjournment. They hold whatever progress they have made, and many of them are certain to be important issues next year.

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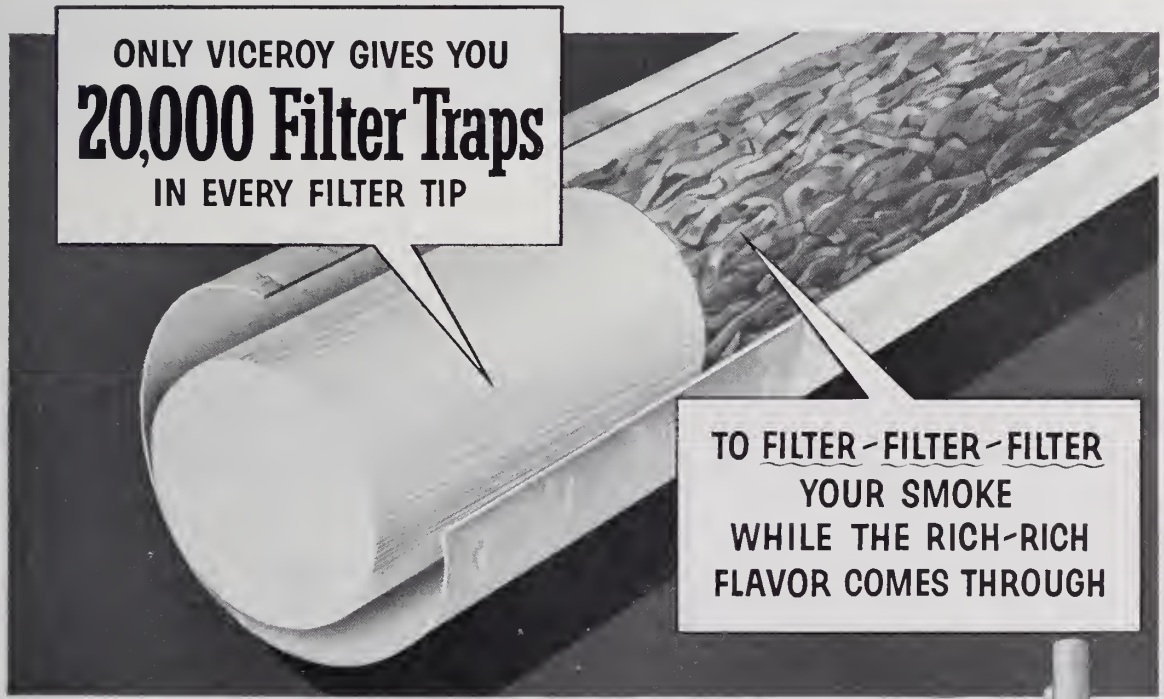

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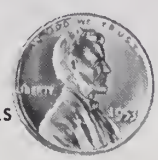

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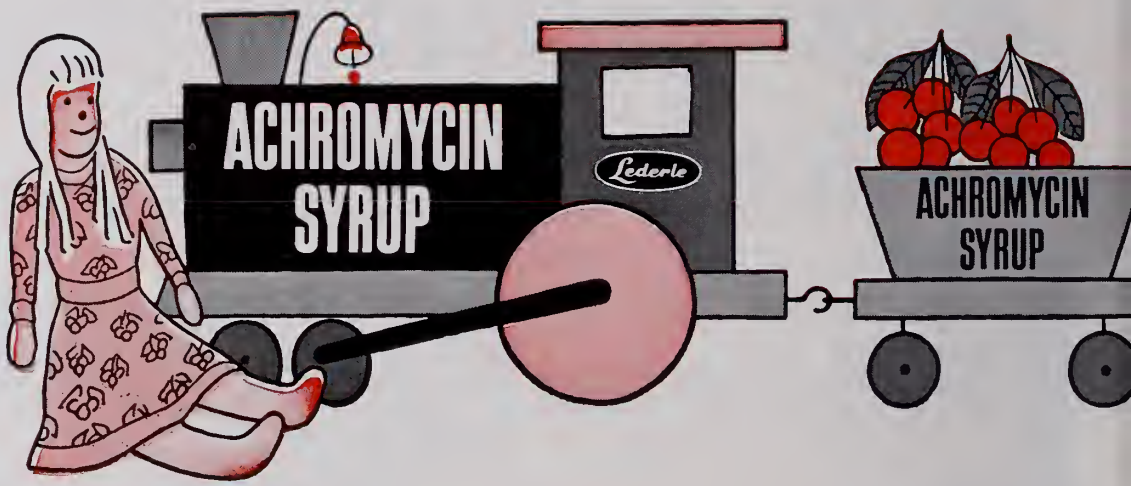

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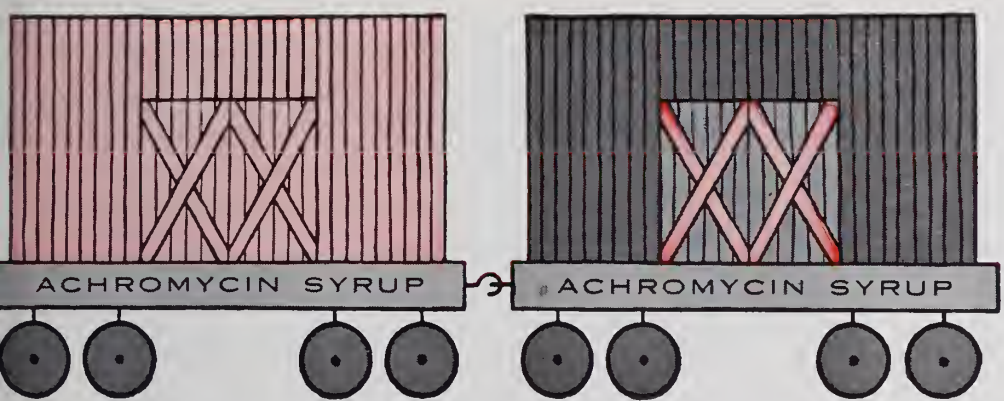

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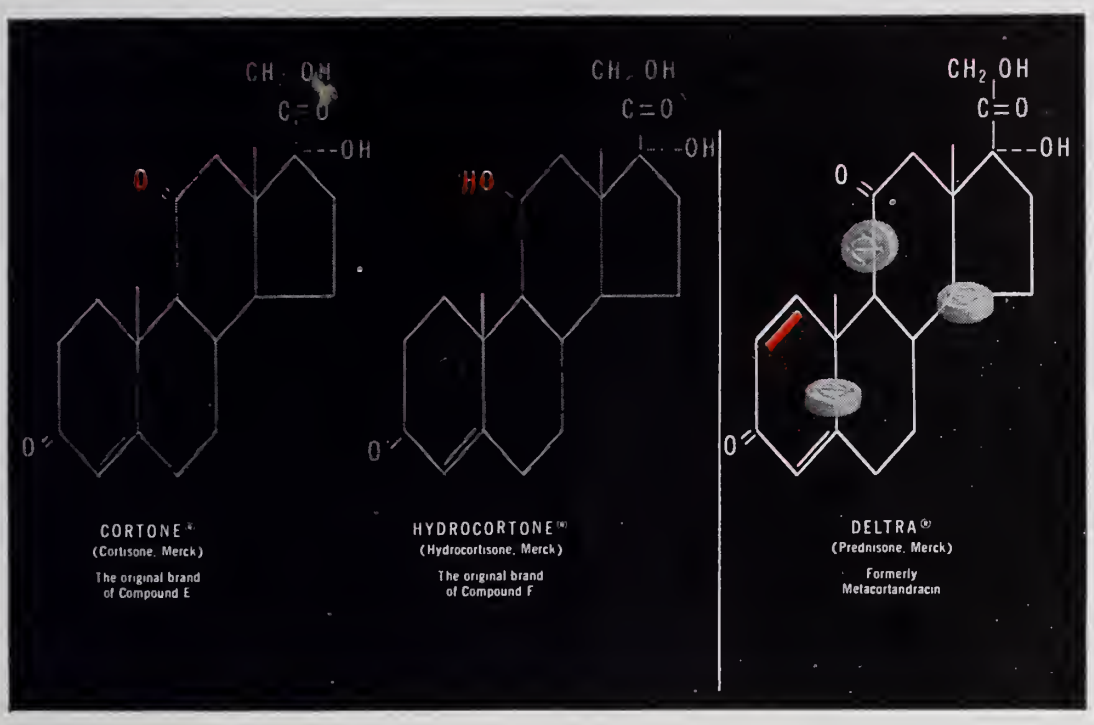

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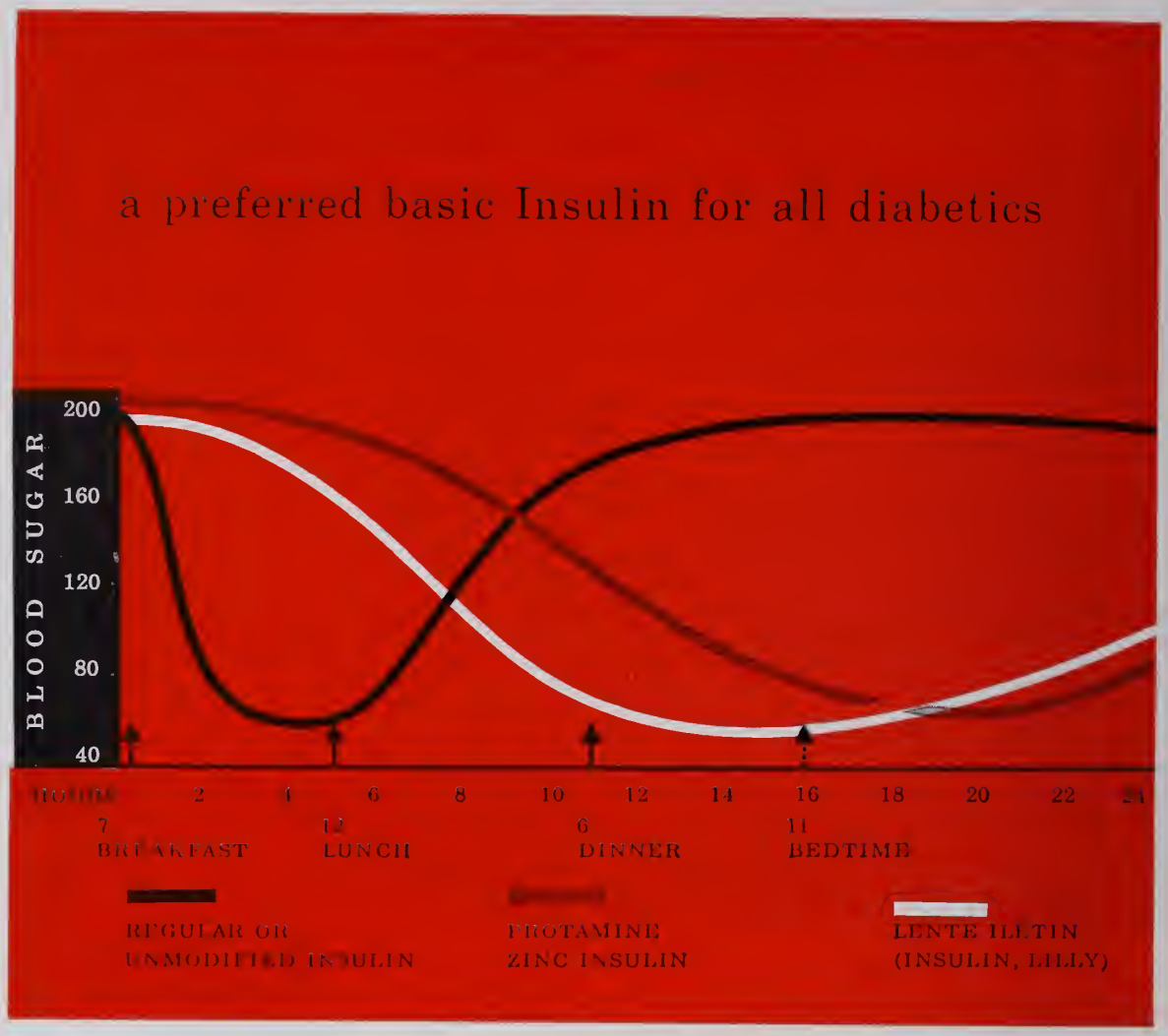

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The JOURNAL of the
Kentucky State Medical Association
ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL
VOL. 53 JULY, 1955 NO. 7

Recommended Expansion of Interests in Anesthesiology*

CURTIS B. HICKCOX, M.D.**
and
RALPH M. TOVELL, M.D.**
Hartford, Connecticut

Anesthesiology is truly a medical specialty of the Twentieth Century even though clinical anesthesia was demonstrated slightly more than 100 years ago. For three generations the emphasis was long on art and skill but short on medical science and education, and during this period few physicians were attracted to a practice which was also engaged in by non-medical individuals. Early in the Twentieth Century however a small number of dentists and physicians independently introduced apparatus and methods to facilitate anesthesia for the dental and surgical procedures then in vogue and, as a result of their missionary zeal, other physicians were able to visualize the need for a new type of practitioner who combined the lessons of pharmacology and physiology from the purely investigative laboratory and applied them with a certain measure of success in the hospital operating rooms. At this time it became apparent that more than art and skill was required in clinical anesthesia to decrease morbidity and mortality rates and to parallel advances in surgical technics. One has to look back only thirty years to realize what has developed not only in anesthesiology but in all phases of medicine. At that time there were fewer than one dozen recognized specialists in the United States who administered anesthetics to patients undergoing surgical procedures; agents were limited to procaine for local anesthesia and chloroform, ether or nitrous oxide for general anesthesia. Asepsis was gaining general acceptance but even so patients frequently succumbed as a result of anesthetic and surgical practices. Nutrition, fluid and electrolyte balance, transportation of oxygen, elimination of carbon dioxide and mechanics of circulation and respiration were factors that did not rate much consideration since their relation to the patient in need of operation was not clearly understood. To us who now look back into the pre-atomic era of one generation ago it appears that anesthesia and surgery were primitive but lest one become too satisfied it might be anticipated that we may appear just as undeveloped if our successors survey progress thirty years hence.

The hospital of today is not the physician's workshop as frequently stated in the past but now is actually a health center if current responsibilities are accepted. Four fundamental divisions should be found within a modern hospital: medical service, graduate education, research and preventive medicine. These supporting pillars in the structure of health require team work for successful integration and it is our premise that the medical and surgical staff should supply the leadership and captains for this team. Personnel will be varied in each fundamental division and will include, in addition to physicians and nurses, many individuals in the sciences as well as technically trained workers in the medical specialties. Financial support for the entire program cannot be expected to come wholly from patients, thus resources must be found in each community or regional area to allow for im-

*Presented at the Scientific Assembly of the Kentucky State Medical Association, Louisville, Kentucky, September 23, 1954.

**Department of Anesthesiology, Hartford Hospital.

provement of health parallel to that which is best in this nation. An active and aggressive lay board of directors led by a medical director acceptable to the hospital staff round out the health team as we understand it today. As physicians, we in anesthesiology must recognize our responsibilities in community health and should expect to supply not only workers but an occasional leader.

The broadening responsibility of the anesthesiologist can best be shown by detailing some of his present day interests as compared with the past. Instead of simply rendering a technical service at the surgeon's request to a patient who is seen for the first time in the operating room it is not unusual to receive a request for consultation soon after a patient is admitted to the hospital to evaluate cooperatively the need for preoperative studies. Evaluation of patients prior to operation will depend upon the nature of the contemplated procedure, upon the capabilities of the staff and upon the facilities available in the hospital. For example, in the past when a patient was scheduled for resection of the stomach for peptic ulcer the laboratory reports might include a red blood cell count, a value for hemoglobin and probably a simple gastric analysis and urinalysis. Now however the same patient will often be surveyed from the broader standpoint of nutrition, circulation, respiration and emotional state. If abnormalities or deficiencies are discovered an attempt is made to correct them prior to operation. It is usual now to spend several days preparing the patient rather than admitting him on the evening before the day of operation. The anesthesiologist should utilize this time to observe the patient and complete whatever diagnostic or therapeutic measures may be necessary to prepare for a safe and successful program of anesthesia and surgery. In support of this procedure we cite a statistical survey completed in New England (1) for the year 1951 covering attempted or completed operative procedures upon 388,203 patients. A total of 2,924 deaths was revealed during the hospital stay. Fifty-four per cent of the deaths were found to have a direct or indirect relationship to the patient's condition prior to the surgical intervention. It is apparent that our serious efforts should be in the direction of improving the patient's condition *before* he comes to the operating room.

In regard to nutrition, weight loss is of particular interest since there may be depletion of water, essential vitamins, proteins and important electrolytes as well as fat. A red cell deficiency may be present. Since World War II an appreciation of hypervolemia and increased red cell mass has resulted from blood volume studies. It appears now to be just as important to recognize and treat patients with excesses as we did formerly when deficits were found. The National Research Council (2), has pointed out that in humans, starvation can proceed to the point of wasting one quarter of the body weight before circulating blood shows any change in percentage relationship of red cells or proteins. Blood volume determination however on the individual who has been starved will show marked deficits in total values for both red cells and plasma proteins and restoration to normal is necessary for this patient if surgical procedures or anesthesia are to be successful and safe. In our experience patients with hematocrit values above 50 presented a picture of polycythemia which is not complimentary to the body economy and which in time of stress may lead to complications (3). For example, a fifty year old male patient who presented himself for surgical removal of a renal tumor is found to be grossly overweight, somewhat hypertensive, has dyspnea on exertion and the value for hematocrit is high. This patient while at rest or doing light work is already calling upon his reserves to carry on normal functions of circulation and respiration. If the stress or strains of general anesthesia and operative procedure are added to this patient's burden, failure of vital systems may occur. With an excess of red cells present, the viscosity of the blood is increased and the work of the heart in maintaining an adequate output for normal circulation is also increased. If relative viscosity of blood is too high or if cardiac reserve is low or if hypoxia occurs as a result of difficulties during anesthesia then the critical point may be reached beyond which the heart is unable to cope with the load. Circulation is retarded and hypoxia becomes severe, following which changes occur in permeability of endothelium which may finally lead to intravascular coagulation or thrombosis. At the same time the heart may begin to fail and pulmonary edema during anesthesia may become evident. The clinical evidence of increased viscosity during anesthesia is the appearance of a cape-like area of cyanosis involving the head, neck, shoulders and even the dependent parts of the body. The cyanosis

frequently does not disappear even when oxygen is administered in adequate volume and under a pressure which will guarantee normal ventilation. It is believed that patients who have a hematocrit over 50 are not suitable subjects for general anesthesia.

The determination of blood volume is relatively easy and may be accomplished by one of several clinically proved methods in the average hospital laboratory. A simple yet effective method utilizes "Evans Blue Dye" in a timed blood dilution test. Others employ radio-isotopes to tag or identify a single element in the circulating blood. The results yield information on volume of plasma, volume of red cells, amount of plasma proteins, and an estimate of the total circulating blood volume. Deficiencies and excesses may be recognized and optimal replacement or withdrawal therapy may be undertaken preoperatively. There are pitfalls if one becomes absorbed in the intricacies of this test and ignores the patient as a whole. Simple dehydration, requiring water and common electrolytes to restore normalcy, will show blood concentration and an elevated hematocrit. If the volume of plasma is in excess of normal, packed red cells may be given to correct the anemia, thereby avoiding the hazards of pulmonary edema due to inadvertent production of hypervolemia following administration of fluids and whole blood in an attempt to prevent operative shock. The following case report is illustrative of the value of preoperative blood volume study.

A seventy-three year old male was admitted to the Hartford Hospital recently with a complaint of rectal discomfort and a change of bowel habits of several weeks duration. The past history revealed several surgical procedures including removal of a pituitary tumor at age 58. He had also been admitted to the hospital on different occasions in the past two decades for thrombophlebitis of the lower extremities, coronary thrombosis and most recently for one episode of cerebral vascular insufficiency at age 68. Physical examination was not remarkable except for constricted lumen of rectum at the level of the internal sphincter demonstrated by digital examination. Proctoscopic examination revealed a rectal tumor which proved to be adenocarcinoma of the rectum, grade 2, by microscopy. Hematocrit was 49, hemoglobin 14.5 grams and plasma proteins 7.5 grams per cent. Blood volume determination by means of Evans Blue Dye corroborated the hematocrit reading but revealed a shrunken total blood volume with a calculated deficit of approximately 1764 cubic centimeters. Specific deficits were as follows: Total plasma protein 68 grams, plasma volume 728 cc. and red cell volume 720 cc.

On the basis of the blood volume determination it was recommended that 1000 cc. of whole blood be administered in the preoperative phase in an attempt to approach normal red cell and plasma volume. An abdomino-perineal resection of the rectum and sigmoid colon was completed in one stage under general anesthesia using cyclopropane-ether-endotracheal anesthesia during which time an additional 1000 cc. of whole blood was given. The patient tolerated the anesthesia and surgical procedure well and the first twelve postoperative days were uneventful. Thrombophlebitis of minor nature occurred in one leg but subsided without specific therapy. The patient continued to ambulate and had an uncomplicated convalescence.

Certain aspects of circulation and respiration were alluded to in discussing blood volume determination and it appears in order to consider these vital functions together. During the past generation surgical teams assisted by many workers in special fields have gradually overcome the psysiologic problems of operating safely within the thorax and in the past few years within the heart itself. A recent casual visit in two large teaching hospitals revealed three operative procedures upon the heart scheduled in one hospital and four in the other. Not only are abnormalities of the congenital heart and its blood vessels being corrected surgically but acquired diseases of the heart are being attacked by courageous physicians and surgeons who refuse to stop short of victory. The anesthesiologist in this team has been presented with many new problems and while some earlier teachings have been discarded those relating to the intake and transport of oxygen to the tissue cells of the heart, brain, liver and kidneys have remained as fundamental laws, subject to reasonable change but not violation. The removal of waste carbon dioxide from the body is so intricately related to utilization of oxygen that it is often forgotten, yet excesses of carbon dioxide may lead to cardiac arrest and wreck the human machinery just as effectively as lack of oxygen does.

In all anesthetic procedures and particularly those for surgical intervention

within the thoracic cavity, ventilation, either by the patient, the anesthesiologist, or by apparatus automatically and electronically controlled, is necessary at present to deliver oxygen to the alveolo-capillary bed in adequate amount per unit of time. In addition to this the human heart or a suitable substitute must circulate an adequate amount of whole blood (or reasonable oxygen carrying menstrum) per unit of time to vital organs. Failure at any point along this complex assembly line will stop production just as surely as the breakdown of a single machine at one of our steel mills will halt the production of steel. Variations may occur however at many points and thus newer procedures have been made possible which were only dreams a generation ago. At the far end of the line, by cooling tissues, the speed of metabolism of cells may be decreased and thus their minute demand for oxygen decreased. Hypothermia (reduced body temperature) during anesthesia has been tried in the United States and elsewhere (4,5) primarily by surface cooling and has been most successfully used during operations upon the heart in children. More recently it has been used for adults during attempts to repair defects within the heart while circulation was interrupted. In France (6) the idea of reduced body temperature has been extended by the use of analgesic and antihistaminic drugs in combination with cooling and the term "artificial hibernation" has been attached to the method. Although still experimental, it is quite daring in its aim, that of reducing vital body functions to a state of suspended animation so that major surgery may be undertaken with minimal blood loss and shock. During the state of hypothermia body temperature falls to approximately 25 degrees centigrade and blood pressure is appreciably reduced. The procedure is time consuming and recent critical review of claims made for the method casts some doubt upon the site of action of the drugs and the factor of safety. It is suggested that hibernation is an improper term for the condition of induced hypothermia and that the action of the drugs used is primarily one of brain depression rather than ganglionic blockade.

Our experience with cooling has been limited to the reduction of temperature in an extremity in which irreversible damage has occurred and elective amputation has been planned. Usually the patient is in the seventh or eighth decade of life and his physical state is poor. Frequently, uncontrolled diabetes mellitus complicates the problem and acidosis with dehydration is present. A period of one or more days of cooling or actual freezing with dry ice of a gangrenous lower extremity usually allows improvement in control of the diabetes, a chance to combat infection by specific therapy and alleviation of pain, all of which lead to improvement in physical state and a higher surgical recovery rate. Reduction locally of temperature by cooling in an extremity following arterial obstruction by embolus may improve survival rates after amputation but ordinarily does not alter the need for amputation.

Apparatus has recently been produced for cooling the human body in toto which is partially automatic and has electronic controls for obtaining and maintaining pre-determined temperatures, but to date we have had no experience with total cooling at Hartford Hospital.

The use of high spinal anesthesia to effect total sympathetic block or autonomic blocking drugs to lower blood pressure during general anesthesia has been used in the United States and England (7,8) within the past decade. It has been shown that systolic blood pressure could be safely lowered to levels of 80 mm. Hg. or lower without apparent damage to brain, heart, liver or kidneys if patients are carefully selected.

Coincidental with autonomic blockade there is a release of arterial tone or peripheral resistance so that with a systolic pressure as low as 60 mm. of Hg. it is possible to maintain the capillary circulation if blood volume is within normal limits and capillary tone is unaltered. Efficient circulation of oxygenated blood ensures adequate cellular respiration and metabolism and promotes good venous filling, in turn assuring adequate cardiac output. Circulation to the kidney may be altered but adequate function is maintained.

The method was developed primarily in an effort to produce a dry, bloodless field for the operating surgeons and secondarily to economize in the use of whole blood transfusions in an era when military and defense administrators were requesting whole blood from civilian donors for both the military and civilian defense needs. It was not long, however, until anesthesiologists noted other advantages during clinical use and certain disadvantages as well became apparent. On the positive side it was observed that the patient under the effect of a hypotensive

drug during general anesthesia remained pink in color, with warm and dry skin and that the conduct of anesthesia was easy to control with a minimum of anesthetic agents. Disturbing reflexes during surgery and anesthesia frequently leading to undesirable and deleterious changes in respiration and circulation were generally absent when the hypotensive technic was used. Possibly the hazard of reflex cardiac arrest is minimized. Secretions in the upper and lower respiratory tract were diminished, thus ventilation was not impaired. Postoperatively the patients awakened quickly, were well oriented and did not appear to have as much pain as expected from the operative procedure.

On the negative side it must be admitted that the method has narrower limits of safety in that the patient must have well compensated circulation and respiration if one is to use this technic. Decompensation following occurrence of minor deficits in oxygen supply, carbon dioxide removal, or inadequate blood replacement may occur. Pressure breathing which is so common today in anesthetic practice is contraindicated during hypotensive states, thus the anesthesiologist loses one of the standard methods for resuscitation of patients. The basis for the adverse effect of pressure breathing during the period of hypotension is the deleterious action on venous pressure and filling of the right heart when intrapulmonary pressure is increased by manual or mechanical pressure from the anesthetic apparatus (9). During the state of hypotension the circulation to and function of the kidney may undergo marked changes and controversy exists regarding the physiology of the kidney and possible adverse temporary or permanent changes from this newer method of surgical management. The adequacy of cerebral circulation has been of concern to many clinicians, as well as investigators, who are not yet convinced that cerebral blood flow and oxygenation will be adequate in the anesthetized patient with autonomic blockade, a systolic blood pressure of 60 mm. Hg. and a pulse pressure of only 15 or 20 mm. Hg. A few reported complications with the method have raised the fear of cerebral circulatory stagnation and thrombosis of vital vessels of the brain (10). Planned investigation has been undertaken both in England and this country in an effort to answer the questions which have arisen from widespread clinical use of one or more autonomic blocking agents during major surgical procedures.

At Hartford Hospital the value of the hypotensive method was explored with the aid of surgeons and internists for surgical procedures in which excessive blood loss was anticipated and for procedures in which the presence of fresh bleeding might obscure the surgical field and increase technical difficulties (11). Procedures such as spinal fusion, radical mastectomy, neck dissection, radical hysterectomy and ligation of cerebral aneurysm were undertaken while patients were in a hypotensive state following the administration of hexamethonium salts or thiophanium compounds. Results were generally satisfactory but it is our opinion that the method is one which requires a high degree of skill and experience and that it should be limited to procedures in which a greater degree of success can be expected only by its use, or one in which satisfactory operating conditions are obtained only by producing a relatively bloodless field. Coincidental to the production of the hypotensive state there is generalized dilation of blood vessels in the body, a condition which persists until the effect of the causative agent wanes. On occasion the effect may be greater than desired and mechanisms are needed to reverse the autonomic blockade and reestablish a degree of vasoconstriction or increased peripheral resistance. Vasopressor or vasoconstrictor agents are available which allow us to control or terminate the hypotensive state quickly when necessary. Vasoxyl, Neosynephrine, epinephrine, ephedrine and nor-epinephrine are but a few examples of a class of potent pressor drugs which have central and/or peripheral action upon blood vessel tone and caliber (12). Certain of these may aid by producing a decrease in pulse rate and a rise in values for diastolic pressure and stroke volume of the heart which appears to be beneficial to the patient in regard to efficient circulation. A word of warning should be sounded here concerning hazards in the use of vasopressor drugs unless blood volume is maintained near normal value by use of accurate whole blood replacement during the surgical procedure: in the presence of hypotension, blood loss will soon lead to shock unless replacement is quick and adequate. The injudicious use of a vasopressor agent instead of adequately replacing blood may lead to the serious state of irreversible circulatory failure. It is apparent that the technics of anesthesia which utilize hypothermia or hypotension are complex and

should not be undertaken lightly by any individual. Full evaluation by the medical-surgical team preoperatively is a requisite to selection of patients who may benefit from the methods described.

Anesthesiologists for many years have shown an interest in oxygen therapy not only for patients requiring surgery but for others in whom pathologic processes led to disturbances which responded to oxygen as a therapeutic agent. This participation led to an awareness of the need for a broader approach to the principles involved in respiration, the utilization of oxygen and the elimination of carbon dioxide. Nor can one exclude consideration of circulation in all of its aspects whenever transportation of oxygen is considered. Until World War II progress in revealing the physiologic processes underlying hypoxia and hypercapnia was slow and the development of apparatus for diagnosis or therapy was equally slow. With the advent of war and great expansion of aviation it became essential to determine limits of tolerance within which healthy individuals could perform tasks efficiently. Likewise in submarine warfare, as machines were improved, problems relating to changes in atmospheric pressure and alterations of oxygen and carbon dioxide exchange in the human body required investigation and proper solution. The successes of the wartime research eventually were translated into improved technics of diagnosis and treatment for patients with disease, for example, catheterization of the heart in the pre- and postoperative periods for congenital or acquired heart disease or pressure breathing by automatic apparatus during operation upon the lung. These are now accepted as Twentieth Century practices to which newer concepts are constantly being added. No less than five different anesthetic machines were displayed at a recent meeting which incorporated apparatus for automatic or semi-automatic control of ventilation as an aid to the anesthesiologist interested in maintaining normal values for arterial concentration of carbon dioxide and oxygen. Barach's exsufflator is still another application of simple physical principles, clarified in the past decade, which produces desirable therapeutic results by effecting an involuntary cough for the patient who is unable to clear his tracheal-bronchial passages (13). Thus you can visualize the progress which has taken place, yet in spite of rapid development of new methods and agents we still encounter difficulties over which we do not have adequate control. Sudden deaths in the operating room and in the immediate postoperative period occur too often and information concerning causes is often lacking. Much has been written in both the lay and medical journals regarding heroic resuscitative measures but it is our opinion that if we had more adequate information about patients preoperatively, hazards would be more frequently recognized and avoided. It is logical that there should be increased interest in the study of cardio-pulmonary function prior to operation. In regard to the respiratory phase we should be able to make more intelligent preoperative evaluation of each patient if we obtain knowledge of the respiratory pattern and of alterations in pulmonary capacity and efficiency of ventilation. A careful study of the respiratory status may lead to appropriate selection of agents and methods of anesthesia and may have a deciding influence upon the planning and extent of the operation and finally on the prognosis. This is true whether the contemplated operative procedure is to involve structures within the thorax or remote from it. The determination of factors producing abnormalities of ventilation or alveolar respiration is a worthwhile supplement to a careful history and physical examination for patients about to undergo a major surgical procedure.

The analysis of pulmonary function has aroused renewed interest in a careful physical examination of the chest revealing many of the essential features of ventilation. While the patient is breathing normally one can observe the overall shape and size of the thoracic cage as well as the rate and amplitude of motion of the chest and abdomen. If the patient is asked to breathe deeply, maximal amplitude and speed of motion can be observed. Costal motion can be distinguished from diaphragmatic. By auscultation the intensity, quality and duration of the breath sounds can be elicited. Narrowed airways can be detected by the presence of wheezing. In addition, every patient should have a roentgenogram to exclude the presence or measure the extent of pulmonary disease. Fluoroscopy facilitates differential estimation of costal and diaphragmatic motion in reference to pulmonary function of one lung compared with the other. Change in radiolucence will reveal significant air trapping indicative of retention of carbon dioxide. Shift of the heart and mediastinum may give valuable warning of the hazards of paradoxical breathing during

operation. Too often these observations are considered routine and we fail to appreciate their purpose or significance. Radiologists might well be asked to report their observations in these terms.

It is to be remembered that under basal conditions consumption of oxygen is at the approximate rate of 300 cc. per minute. Under conditions of maximum exercise consumption may be at the rate of 3,000 cc. per minute requiring movement of some 90 litres of air into and out of the lungs. Tissue of great elasticity, expansibility and resilience, that at the same time is being perfused by whole blood at a rate of over 25 litres per minute or almost one pint per second, is required. By our examination we attempt to evaluate each patient in regard to his ability to tolerate changing conditions that will be imposed by establishment of anesthesia, loss of muscular tone, dilation of the vascular bed and possibly hemorrhage at time of operation.

If our preliminary investigation reveals an inability to cope with stress, we should determine where the fault exists. Is there interference with the mass movement of air into and out of the chest because of failure of motion of the thorax, the diaphragm, or abdomen? Is there proportionate distribution of the inhaled air to countless alveolar spaces that are being perfused with blood through the alveolar capillaries? Is the alveolo-capillary membrane capable of diffusing oxygen in one direction and carbon dioxide in the other? Is there a fault in pulmonary blood flow? These questions cannot all be answered by means of the simple observations that have been mentioned, but valuable impressions can be gained.

In order to evaluate patients who are considered poor risks, and who are about to undergo major surgical procedures, additional tests should be undertaken. Vital capacity may be measured using a simple volumetric spirometer, but the information may be misleading because the rate of taking the maximum breath is not recorded. Vital capacity may be a good index in the presence of restricted breathing after a thoracoplasty, but it is a poor index in the presence of asthma where the chief difficulty is not in reference to reduced amplitude but to retardation of rate of exchange. The respiratory pattern can be recorded graphically if a closed circuit spirometer is employed. The maximum breathing capacity, which is the greatest amount, measured in litres, that can be moved into and out of the lungs per minute, can be determined. The normal value for the average woman is 100 litres per minute and for the average man 150 litres per minute. An improvement of more than 10% after the administration of a bronchodilator by nebulization indicates that spastic bronchiolar constriction is a factor interfering with ventilation. Under these circumstances the preoperative administration of a bronchodilator may make the difference between success and failure in a patient whose ventilatory capacity is compromised. In general, maximum breathing capacity reflects the efficiency of the chest bellows and its supporting parts, the amount of aerated pulmonary tissue, the distensibility and elasticity of the lungs, the degree of patency of the air passages and the general physical fitness of the subject.

An estimation of breathing reserve is helpful in determining operability and in predicting the postoperative ventilatory status. The breathing reserve equals the maximum breathing capacity minus the ventilation of the moment. Breathing reserve is determined usually both at rest and during the exercise of walking. The normal range of ventilation is from 8 to 30 litres per minute. When the walking ventilation exceeds 50 per cent of the maximum breathing capacity, pulmonary efficiency is materially impaired, dyspnea will appear under minimal stress, and administration of an anesthetic by inhalation for a major surgical procedure will be hazardous. Dyspnea is usually recognized by a patient when, during a simple two-step exercise test, his breathing reserve is less than 70 per cent of his maximum breathing capacity. A normal patient asked to step up and down on a stool 20 cm. in height thirty times in one minute will show no significant breathlessness, but for patients with mild cardiac or pulmonary disease dyspnea may be in evidence for two minutes. The actual ventilation during recovery may be ascertained minute by minute, and an end point thus be established for dyspnea. The rate of return to normal is significant.

Estimation of residual air, the volume remaining in the lung at the end of a deep expiration, is worthwhile where emphysema of major degree exists. The value is greatly increased, sometimes three fold beyond the normal of 1500 cc. in advanced emphysema. Under such circumstances the stress of anesthesia and operation will be hazardous, and if the

aerating pulmonary surface is reduced by the operative procedure, the prognosis will be grave. To accomplish the test, the patient inhales pure oxygen for several minutes and the expired air is collected in a large Douglas bag and is measured by expressing it through a gasometer. Chemical analysis of the contents of the Douglas bag is necessary for completion of these tests but for those who do not have facilities available for chemical analysis of air samples a test has been proposed in which accurate measurement is made of the time required to obtain complete saturation of the arterial blood while breathing pure oxygen. Readings of oxygen saturation are taken at short intervals by means of an oximeter attached to the ear. High concentrations of alveolar oxygen are quickly reflected in the oxygen saturation of the blood passing through the ear. Any delay tends to indicate slow distribution of inhaled oxygen to functioning alveoli. The saturation-time test is of practical value because no analysis of blood or expired air is necessary.

Oxygen intake during exercise or cardiovascular stress is largely dependent upon the rate of blood flow and failure of the blood flow to increase normally, as a response to stress, is indicated by low oxygen consumption. A critical situation can develop dependent upon each patient's ability to increase his blood flow through his lungs under conditions of stress and strain of operation and anesthesia. A standard exercise test of one minute's duration provides indirect evidence of his ability to increase his blood flow. Oxygen uptake under conditions of rest and standard exercise can be measured preoperatively. The average normal intake during one minute of exercise is 500 cc. per square meter of body surface. An oxygen intake less than 350 cc. per square meter indicates that there has been less than the normal increase in cardiac output in response to exercise. Patients in this category tolerate deprivation of oxygen poorly, and this factor must be kept constantly in mind during administration of a general anesthetic.

The following case reports demonstrate the value of pulmonary function studies:

(1) A 60 year old restaurant manager visited his physician following an illness of three and one-half weeks' duration, characterized by cough, bloody sputum and chills. A clinical and roentgenologic diagnosis of pneumonia was established and treatment with antibiotics for two weeks led to improvement. An area of pulmonary atelectasis persisted and the patient was admitted to the hospital for further study, following one episode of hemoptysis. Bronchoscopic examination revealed a narrow, edematous bronchus of the posterior basal segment of the left lower lobe of the lung. Papanicolaou smears from the involved area were positive for bronchogenic carcinoma, class four. The electrocardiogram revealed evidence of old myocardial infarction, of which there was positive history eleven years previously. Respiratory function studies revealed a 225 pound, obese male, 5 feet 9½ inches tall who showed decrease in Vital Capacity to 76 per cent of normal and Maximum Breathing Capacity to 40 per cent of estimated value. Walking ventilation was increased indicating decreased Breathing Reserve and the patient became dyspneic during the tests. Differential fluoroscopy revealed no trapping of air nor any shift of the mediastinum. There was excellent motion of the rib cage and hemi-diaphragm on the right side but severe limitation of rib motion on the left and inability to determine position of the left hemi-diaphragm. As a result of the total data operability was questionable and when the patient and wife were informed of the hazard they decided to forego the risk. A consultation in a nearby thoracic clinic confirmed our opinion, accordingly the patient was discharged home unimproved and died as a result of metastatic extension of his pulmonary disease in approximately seven months.

(2) A 46 year old white male had a history of two admissions to a sanatorium for pulmonary tuberculosis of nine years' duration. Artificial pneumothorax had been employed successfully on the left side for a five year period but failed when disease occurred on the right side after two years of apparent arrest. Specific anti-tuberculosis drugs were administered and a right primary phrenicolysis was completed with paralysis of the right hemi-diaphragm. The patient was finally selected for surgical resection of the diseased lung on the right. Pulmonary function studies were undertaken in an attempt to determine preoperatively how much lung could be safely sacrificed without jeopardizing the patient's chance of complete physical recovery. Tests revealed a Maximum Breathing Capacity of 102.8 liters per minute, Walking Ventilation of 23.1 liters per minute which were

acceptable preoperative values. Differential fluoroscopy was not remarkable. Bronchospirometry, however, was most revealing since vital capacity of the right and left lungs was equal and ventilation on each side followed a normal pattern but the oxygen consumption in the left lung was only 15 per cent of the total whereas the right lung was 85 per cent. The medical-surgical team commented preoperatively that this patient had a tuberculous cavity in the right upper lobe and that the left lung which had been previously collapsed by pneumothorax for five years now showed a considerable amount of fibrosis, emphysema, and calcification with chronic pleuritis. Accordingly a wedge resection of part of the right upper lobe was done and the patient was discharged improved after seven months of bed rest and graduated activity. Repeat pulmonary function studies postoperatively at three months and eight months revealed a Maximum Breathing Capacity one and two liters per minute greater respectively than the preoperative reading. A single test of oxygen consumption during differential bronchospirometry proved conclusively that the right lung should be spared as much as possible since it was responsible for taking up 85 per cent of the oxygen needed by the patient. A right upper lobectomy or even a segmental resection of the lobe might have led to serious respiratory deficiency. The respiratory tests just described can be performed in any hospital or clinic by physicians interested in cardio-respiratory physiology. Anesthesiologists in some institutions have accepted the responsibility of learning to carry out the studies in the absence of other trained personnel so that patients might be better served. The problems of diagnosis and therapy and the direct patient contact has broadened their views and led to progress in clinical research. Similarly, clinicians with motivation to obtain information about the heart can learn the procedures necessary to evaluate patients prior to surgical intervention in the presence of congenital or acquired defects of the heart and blood vessels. Teamwork is more essential for the latter task since the complex apparatus requires the presence of more than one individual and facilities of the laboratory and radiology departments are needed to successfully complete the more elaborate procedures.

Before leaving the subject of respiration and circulation it is worthy to note the nation-wide growth and acceptance of post anesthesia observation rooms most commonly called the "recovery room." Lundy (14) describes the advantages of such a room ten years ago following its establishment at one of the hospitals associated with the Mayo Clinic. It was not long before others followed suit by allocating space in new hospital operating sections or re-arranging rooms in existing buildings. The increased safety and comfort for patients has appealed to the public in many community hospitals where recovery rooms are now part of the surgical program. It is satisfying to learn that in the national joint accreditation program for hospitals credit is given for the existence of a recovery room. As a result of a satisfactory experience of six years in supervision of the recovery room in the surgical operating section at the Hartford Hospital it is our belief that respiration and circulation can best be observed and maintained within safe limits by the close attention of personnel especially trained to care for the patient immediately following anesthesia and surgery. If the recovery room assists in lowering mortality and morbidity rates associated with surgery and anesthesia it seemed reasonable to believe that newborn infants which showed any variation from normal might also benefit by a period of close observation by highly skilled personnel. A section of the premature nursery at Hartford Hospital was set aside in June, 1953 for observation and special care of infants who in the opinion of the obstetrician, anesthesiologist or pediatrician had not shown adequate respiratory exchange, or muscle tone, or who had exhibited general depression as a result of medication or anesthesia administered to the mother for labor and delivery. Infants below the weight of five pounds four ounces are automatically admitted to the premature nursery which is adjacent to the delivery rooms, rather than one of the regular nurseries adjacent to the mothers' rooms. The same advantages of constant observation and special care by a small number of skilled nurses with a concentration of necessary equipment are obtainable under these arrangements. The infant who may have required resuscitation in the delivery room may be immediately transferred in a matter of a few minutes to the recovery room where bassinets are available for controlled temperature, humidity and oxygen or other type of therapy. To date 229 infants have been sent to this recovery room and the average duration of stay has been twenty-four hours. Nineteen newborn infants have

died while in this special observation nursery.

Let us now turn and consider a problem in neuro-psychiatry. Patients with psychiatric disorders who had been receiving electro-shock therapy were of only casual interest to us in the past until the psychiatrists described difficulties that arose as a result of treatment. These were either respiratory complications associated with apnea or aspiration of foreign material into the pulmonary tract, or circulatory in the nature of coronary insufficiency or myocardial failure. On occasion our services were requested for administration of anesthesia to facilitate reduction of fractures of the spine or long bones which resulted from the clonic phase of the grand-mal seizure. Complications also occurred when attempts were made to use muscle relaxants but no provisions were made for safeguarding the airway or for resuscitation of the patient in apnea. A frank discussion of convulsive therapy in psychiatry led to the conclusion that the anesthesiologist might join the therapy team in an effort to allay fear prior to the electric shock, to prevent hypoxia during and after the procedure and to soften the convulsive tonic-clonic seizure. In September, 1952 we instituted a program based upon the use of a soluble short-acting barbiturate (Thiopental sodium) and a short-acting muscle relaxant (succinylcholine chloride) intravenously and oxygen inhalation by intermittent positive pressure. The trial study proved so successful that the Department of Psychiatry has recommended that in general all patients requiring electro-shock therapy receive a general anesthetic and a muscle relaxant under the direct supervision of a qualified anesthesiologist. To date 4500 procedures have been completed successfully for outpatients and inpatients by a team comprising the psychiatrist, anesthesiologist and graduate nurse. It is the consensus that the method offers increased comfort and safety to patients without alteration of desired therapeutic effect and the psychiatrist is happy to be relieved of responsibilities which lie outside the scope of his specialty. Further experience is necessary before specific claims can be made concerning improved results from the psychiatric standpoint.

Throughout this discussion there has been no mention of the ordinary agents and methods used by the anesthesiologist in the performance of his usual daily duties. This omission has been deliberate in order to allow consideration of other subjects which are not commonly presented. We make a plea for the complete evaluation and care of patients who place their physical and mental well being in our hands during short periods of major stress. Possibly their faith is misplaced but we should accept the challenge and give them the expanded services which are possible to those who see through the doorway of today's medical sciences. The science of anesthesiology is still in its infancy and our field is not a narrow or circumscribed one, on the contrary it remains for pioneers yet to come to conquer the rugged peaks in our horizon of health.

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Placenta Accreta

JOHN W. W. EPPERSON, M. D.,
J. H. LUZADRE, M. D.*
C. M. LACY, M. D.
Owensboro

Placenta Accreta is an interesting complication of parturition which often demands heroic treatment and may be responsible for a maternal death The abnormal adherence of the placenta to the uterine wall is apparently the result of a previously existing endometrial deficiency. This defective endometrium may have resulted from previous intrauterine manipulation or operation, uterine disease, radiation, or be normal anatomy as when the placenta implants in the lower uterine segment or the cervix. During implantation, conversion of the abnormal endometrium into normal decidual tissue does not happen, and the decidual basalis is either absent or defective. The chorionic villi then penetrate varying distances into the uterine wall, resulting in abnormal attachment of the placenta, and normal separation does not occur at the time of delivery.

When the decidual basalis is absent or defective beneath the entire area of placental attachment a complete placenta accreta occurs. A partial placenta accreta may be diagnosed if only a portion of the implantation site is affected. The entity is further classified according to the depth of penetration of the individual villi into the uterine wall. If the villi involve the entire thickness of the uterus, with or without perforation of the serosa, placenta percreta is diagnosed. Increta is pronounced invasion of the uterine wall by the chorionic villi and accreta is moderate penetration.

Incidence

The actual incidence of placenta accreta is unknown. Reports vary from one in 1,956 term deliveries to one in 67,000. The difference in these figures may be due to the difficulty encountered in obtaining pathologic confirmation of the clinical diagnosis. This is especially true if multiple microscopic sections are not made. Many retained and then manually removed placentae may actually be focal or partial accreta and with the uterus left in situ there is no placental site to examine. Without microscopic examination of the uterine wall absolute proof is lacking. Even after hysterectomy microscopic evidence may not be found.

Retention of the placenta and hemorrhage immediately following term delivery are the classical characteristic symptoms of this disease. However, it should be emphasized that the disease may occur at any time after implantation of the conceptus, and a patient with a retained placenta, of any duration, should be treated expectantly. The disease may be unrecognized for varying intervals of time if an adherent cotyledon is left attached to the uterine wall after either spontaneous or manual delivery of the remainder of the placenta. The clinical diagnosis may be made when no line of cleavage is discernible between the placenta and uterine wall during attempted manual removal of the adherent placenta.

Manual shelling of the adherent placenta from the uterine wall in the presence of placenta accreta is very difficult. Areas of attachment are frequently torn and hemorrhage occurs. The hemorrhage results from tearing the large venous sinuses that develop in the myometrium beneath the placenta. If the villi have penetrated deeply into the myometrium or to the serosal surface, perforation of the uterus may occur during removal, with the usual attendant difficulties of a ruptured uterus.

Treatment

Any patient with a retained placenta, if not in a hospital should be taken to one. Blood and expert anesthesia should be made available. Incautious, rough, hurried or overzealous attempts at manual removal of the placenta should be avoided. The fingers should gently search for a line of cleavage and if one is not found the clinical diagnosis may be made. If the examination is gentle the placenta and uterine wall are not damaged, hemorrhage will not occur, and the patient may be watched expectantly. Although it may take several weeks, the placenta will become organized and will eventually slough from the uter-

*Henry Ford Hospital, Detroit, Michigan.

us. The uterus is saved and future childbearing may be possible. If however, during the examination, the placenta or uterine wall are damaged and severe hemorrhage occurs, then the uterus must be immediately removed.

If a cleavage plane is found and separation is started and then an area that does not separate easily is found a diagnosis of partial placenta accreta may be made. Forceful separation of these focal or partial attachments should not be done because the uterine wall and vessels will be torn and/or ruptured. If separation is not done and hemorrhage doesn't occur, the uterus may be packed and the patient treated expectantly. Usually, however, the uterus is torn, severe hemorrhage occurs and hysterectomy must be performed.

Antibiotics, improved anesthesia, and the use of blood transfusions have made a more conservative approach in therapy possible, if the diagnosis is made by gentle examinations and the uterus and placenta are not damaged.

Other obstetric phenomena occurring with placenta accreta are unusual and seldom reported; there are only 30 reported cases of placenta accreta coexisting with placenta previa, and even more rare is the occurrence of twins and placenta accreta. The possibility of placenta accreta must be kept in mind when any history of previous intrauterine manipulation is elicited or with any retained placenta or post-partum hemorrhage.

Case Reports

1. 43 year old gravida 3, para 3 had a total abdominal hysterectomy for myoma of the uterus. Eight weeks earlier the patient had spontaneously aborted a 12 week pregnancy and had experienced vaginal spotting since that time. Examination of the removed uterus revealed typical areas of an unsuspected placenta accreta still present.

This illustrates not only the benign course the disease may occasionally have but that it may occur early in pregnancy, and that the disease may often be unrecognized. The myomas may have been responsible for the abortion and the decidual deficiency which led to the placenta accreta.

2. 32 year old gravida 2, para 1 delivered twin infants at term following a normal prenatal course. Two supposedly normal placentae were expressed without difficulty and the post-partum course was normal until the 12th day when the patient had a sudden severe hemorrhage. This was controlled by transfusions and oxytocics. On the 14th day another severe hemorrhage occurred and the patient was taken to the operating room and the uterus explored. An adherent cotyledon was discovered and forcefully pulled free, the uterus being ruptured during removal of the cotyledon. Because of the unavailability of blood and the precarious condition of the patient no further therapy was attempted. Fortunately the patient recovered and was alive and well after 15 years although she never became pregnant again.

This patient was unusual in the simultaneous occurrence of twins and placenta accreta and in the long interval between delivery and the onset of symptoms. The supposed delivery of two normal placentae is explained by either the presence of a spuria lobe of the placenta or else inadequate examination of the placentae at the time of delivery.

3. 32 year old gravida 2, para 0 was admitted in the eighth month of her pregnancy in early labor with membranes ruptured. Her prenatal course had been uneventful. She delivered twin premature infants without difficulty. The placenta was retained and immediate severe hemorrhage occurred. Manual removal was attempted but the one large placenta would not separate in the major portion of its central area. Because the bleeding became more profuse the placenta was forcibly torn away from the uterine wall. The patient then rapidly exsanquinated and died.

This is a more typical example of the signs and symptoms of placenta accreta although the presence of twins was unusual. The retained placenta and hemorrhage made attempted manual removal necessary. However, the very adherent central area should not have been forcefully torn. Immediate hysterectomy would possibly have prevented this death.

4. 21 year old gravida 3, para 2 delivered a term infant without difficulty following a normal prenatal course. The third stage was prolonged, but no hemorrhage was noted. The placenta was manually removed after several areas of unusual adherence of the placenta to the uterine wall were torn free. A moderate hemorrhage occurred and was controlled with oxy-

tocics and blood transfusion. The patient was discharged on her tenth post-partum day. She began bleeding and was readmitted to the hospital on her 22nd post-partum day. Examination in the operating room revealed placental tissue adhering to the myometrium. Total abdominal hysterectomy was done and the patient made an uneventful recovery.

The symptoms of placenta accreta were present although the diagnosis was overlooked when the placenta was first removed and not made until the patient returned three weeks post-partum.

5. 34 year old gravida 6, para 3 had a normal prenatal course until at term the fetal heart could no longer be heard. There was no demonstrable reason for this by physical examination, laboratory tests or x-ray. Induction of labor was attempted on several occasions after the fetus died but was unsuccessful. The patient was kept in the hospital under observation until labor began spontaneously. At once brisk vaginal bleeding started. Sterile vaginal examination revealed a central placenta previa. Immediate Cesarean section was performed and a malodorous macerated term infant was extracted. The placenta would not separate in about a third of its lateral margin and was manually removed under direct vision. Many large sinuses were torn during its removal and massive hemorrhage continued. Total abdominal hysterectomy was done and the patient made an uneventful recovery.

6. 29 year old gravida 3, para 2 had a normal prenatal course and delivered a normal term infant without difficulty. The third stage was prolonged and during attempted gentle manual removal it was noted that the placenta would not separate in its upper half and brisk hemorrhage began. Total abdominal hysterectomy was done and the patient made an uneventful recovery.

Although previous operations have been implicated as contributing to both placenta previa and placenta accreta, in this series only two patients had previous uterine operations and in each instance it was dilatation and curettage (cases 4 and 6). However, four of these patients had reason for the endometrial deficiency: case 5 in the normal anatomy of the lower uterine segment and cervix, case 1 with myomas being present: and cases 4 and 6 with previous D and C operations.

With the exception of the unexplainable intra-uterine death in case 5, all of the patients had a normal prenatal course with no hint of future trouble. This is the usual situation.

Conclusions

A small series of six cases does not lend itself to statistical analysis as to symptomatology, incidence, etiology or preferred method of treatment. These patients, however, illustrate the different signs and symptoms that may occur and demonstrate that whenever an obstetrician is confronted with a retained placenta or post-partum vaginal bleeding within four weeks of delivery that this rare complication should be kept in mind and the patient treated expectantly.

The Present Status of the RH Factor *

GLENN W. BRYANT, M. D.

Louisville

In 1939 Levine and Stetson offered an explanation for the origin of an atypical agglutinin responsible for reactions with a first transfusion in a recently delivered patient. When the serum of this group O patient was tested with other group O cells it agglutinated approximately 88% of them. They suggested that the fetus had inherited a dominant factor from the father which was not present in the mother. Transplacental migration of a minute quantity of fetal red cells would result in immunization of the mother against the factor carried by the fetal cells. This paved the way for an explanation of erythroblastosis fetalis and a new blood factor was described but was not named by Levine and Stetson.

Landsteiner and Weiner in the mean-

*Read before the Kentucky Obstetrical and Gynecologic Society at the 1954 Annual Meeting of the Kentucky State Medical Association at Columbia Auditorium, Louisville, September 21-23.

time were testing human blood with Anti-Rhesus monkey serum. They found a factor which they called the Rh factor. It was soon realized that this was the same factor described by Levine and Stetson.

Clinical Significance

The clinical significance of the Rh factor, known more specifically as D or Rh_0 became apparent when Levine, Weiner and others investigated severe or fatal reactions with first transfusions in recently delivered patients. The obstetrical histories of all patients revealed a high incidence of fetal and neonatal morbidity. These infants were found to have one of the various forms of erythroblastosis fetalis, thought to be caused by intrauterine blood destruction brought about by the action of maternal antibodies which crossed the placenta to enter the fetal circulation and react with and destroy the Rh positive red cells of the infant.

The vast majority of cases of erythroblastosis fetalis occur when the mother is Rh negative and the father Rh positive. During pregnancy if the baby is Rh positive, escape of his red cells into the mother's circulation causes the formation of Rh antibodies which can cross the placenta to enter the infant's circulation and subsequently destroy the Rh positive cells.

Erythroblastosis caused by Rh incompatibility is rare in the first pregnancy in the absence of previous sensitization by blood transfusion, and stillbirth is almost unheard of. Sensitization in multipara appears to be more frequent in women with a history of delivery by Cesarean section, of induced abortion, of premature separation of the placenta and of long, complicated labor. Any of these conditions would promote entrance of fetal blood into the maternal circulation. It is believed that unless a woman is sensitized prior to onset of pregnancy, erythroblastosis, if it occurs at all in that pregnancy, will usually be mild.

To combat some of the untrue statements that have been made concerning the Rh factor, we could make the following comments:

1. It is normal to be either Rh positive or Rh negative just as it is to have brown or blue eyes.
2. Rh incompatible matings i.e., Rh negative wife with Rh positive husband occur in only 13% of all marriages.
3. The vast majority of Rh negative women do not produce antibodies. Rh negative women who do produce antibodies as result of pregnancy usually have one or more normal children before they become sensitized.
4. In incompatible matings, about 50% of positive husbands will be heterozygous; hence at least 50% of their children will be Rh negative and therefore unaffected.
5. The incidence of erythroblastosis in all matings is only 1 in 200 full term pregnancies and in incompatible matings is 1 in 26 full term pregnancies.
6. The prognosis for the affected infant is much better today with the use of immediate exchange transfusion.

The Rh-Hr System

Investigation stimulated by the original discovery of the Rh factor disclosed that there are six related factors in the Rh-Hr system. These have been designated by Fisher as D-d, E-e, and C-c and Wiener uses the symbols Rho-Hro, rh'-hr', and rh"-hr". Each of these factors has been discovered by means of its specific antibody produced in individuals immunized by pregnancy or transfusion. The alphabetical designation seems easier to use and will be followed in this paper.

TABLE 1

	% Positive	% Negative	Incidence of Pure Antibody in Immunized Women
Anti D	85	15	Frequent
Anti d	63	37	Very Rare
Anti C	70	30	Very Rare
Anti c	80	20	Occasional
Anti E	30	70	Occasional
Anti e	97	3	Rare

This table shows that the original Rh factor D is the most antigenic. The clinical terms Rh positive and Rh negative refer solely to the presence or absence of D (Rho). Patients who are C positive and E positive but lack D are listed as Rh negative. For the purpose of donating blood, an individual is Rh negative only when he lacks D, C and E.

Rh negative individuals can be sensitized by one of two ways:

(1) Transplacental immunization of an Rh negative mother by an Rh positive fetus.

(2) Transfusion or intramuscular injection of an Rh negative individual with Rh positive blood. The most severe cases of erythroblastosis foetalis usually occur in women first sensitized by transfusion or intramuscular injection of Rh positive blood.

The three pairs of Rh-Hr factors are genetically related so that each individual will always have in his blood at least one or both members of the paired antigens. Bloods lacking both members of a pair of factors do not exist except in case of a rare genetic anomaly.

If anti-d serum was available, tests with it and anti-D would disclose three types of blood:

TABLE 2

Reaction of Blood with Anti-D	Reaction of Blood with Anti-d	Antigens Present
+	+	Dd
+	−	D
−	+	d

A similar differentiation may be made with the other two pairs of Rh-Hr antisera. Since an individual's blood may be directly shown to carry both members of a pair of factors, it can be stated that the Rh-Hr genes are equally dominant. At one time it was thought that Rho or D was dominant.

Fisher and Race have postulated that there are eight possible chromosomes, each of which carries genes for three factors:

TABLE 3

The Eight Basic Chromosomes of Fisher and Race

DCe (R_1)	dce (r)
DcE (R_2)	dCe (r')
Dce (R_0)	dcE (r'')
DCE (R_z)	dCE (rʸ)°

°—Very rare

Any two chromosomes, one from each parent, may be inherited by an individual so that 36 different genotypes are possible. The most common of these are shown in the following table:

TABLE 4

Common Genotypes

Rh Positive Individuals			Rh Negative Individuals	
DCe/dce	(R_1r)	32.7	dce/dce (rr)	15.1
DCe/DCe	(R_1R_1)	17.7		
DCe/DcE	(R_1R_2)	11.9		
DcE/dce	(R_2r)	11.0	dcE/dce (r''r)	0.9
DCe/Dce	(R_1R_0)	2.1		
DcE/dcE	(R_2R_2)	2.0		
Dce/dce	(R_0r)	2.0		
DCe/dce	(R_1r'')	1.0	dCe/dce (r'r)	0.8
DCe/dCe	(R_1r)	0.8		

Determination of the genotype is frequently important in order to determine whether an Rh positive father is heterozygous (Dd) or homozygous (DD).

TABLE 5

Presumptive Determination of the Common Rh Positive Genotypes

Reactions with Available Anti Sera					First Guess of Genotype	% Incidence of Genotype
Anti-D	Anti-C	Anti-E	Anti-c	Anti-e		
+	+	o	+	o	DCe/dce heterozygous	32.7
+	+	o	o	o	DCe/DCe homozygous	17.7
+	+	+	oo	o	DCe/DcE homozygous	11.9
+	o	+	oo	+	DcE/dce heterozygous	11.0
+	o	+	oo	o	DcE/DcE homozygous	2.0
+	o	o	oo	o	Dce/dce heterozygous	2.0

o and oo—test not necessary

It would be easy to establish this if anti-d serum were available. Since it is very rare, the method most frequently used to determine genotype depends upon tests with the 5 Rh-Hr sera which are usually available. By referring to statistical studies, a presumptive determination of genotype may be made, based upon knowledge of the frequency with which certain chromosome combinations occur. This is demonstrated in table five.

Prenatal Testing

Every prenatal patient should be tested with anti-D serum. If negative then her husband should be typed. In all negative multipara and primipara with history of transfusion, a test for presence of antibodies should be done. Until we know more about the quantitative evaluation of antibodies, I feel that one test in the last six weeks of pregnancy is all that is necessary. If this test is negative, the chances are about 99% that the infant will not show evidence of damage. Should antibodies be demonstrated, then a damaged baby should be anticipated and preparations made for prompt treatment.

The presence of Rh antibodies in the patient's serum can be detected by performing the following tests:

No. I A test with Rh positive cells suspended in normal saline.

No. II A test with Rh positive cells suspended in 22% bovine albumin.

No. III The indirect Coombs test with Anti-Human serum. This is performed on the cells which have been exposed to the patient's serum in test No. I and will detect antibodies which coat but do not agglutinate saline suspended cells.

These antibodies can be divided into two groups—

1. Antibodies demonstrated by saline suspended cell—saline agglutinins.
2. Albumin agglutinins also known as blocking antibodies which coat but do not agglutinate saline suspended cells.

Severe or even fatal transfusion reactions will occur if a sensitized Rh negative individual is transfused with Rh positive blood. In order to prevent these accidents, all crossmatching, regardless of Rh type of the patient, should take into account the possibility of antibodies in the recipient's serum which do not agglutinate saline suspended cells. A Coombs test will detect these antibodies. All Rh negative individuals requiring transfusion, even as infants, should receive only Rh negative blood.

At one time it was thought that a titration of the antibodies would tell how severely the patient was sensitized. This has not proved true. A patient with antibodies in a dilution of 1-32 may have an erythroblastotic stillborn and another one with antibodies in a dilution of 1-256 or higher may have a normal infant. Thus the height of the titre of antibodies is not absolutely related to the severity of the damage of the infant. This refers to the titration of albumin or blocking antibodies.

Zelenik et al has postulated that a quantitative Coombs test will accurately predict erythroblastotic disease in the fetus. They have shown that when antibodies are detected by this test, the baby is Rh positive in each case. They believe that the higher the titre of the quantitative Coombs on the mother, the more severe will be the damage to the baby. From very limited experience with the Quantitative Coombs, I have found that the height of the titre does not always parallel the damage in the fetus. Whether the other conclusions drawn by Zelenik are true, remain to be proved by further study.

Interruption of Pregnancy

A few years ago, when frequent tests for antibodies titre showed sudden rise of titre, it was felt that the pregnancy should be interrupted to prevent further damage to the infant. As a result Caesarean section was frequently used to terminate these pregnancies since very few of them could have labor successfully induced. The premature infants delivered this way fared very badly, and many developed kernicterus. Almost everyone now has given up the use of Caesarean section and premature delivery for an Rh sensitized patient. If you exclude the hydropic form of erythroblastosis, the remainder of these babies seem to have some protection as long as they are in the uterus; shortly after delivery they develop jaundice and become more anemic. Realization of this fact led to the idea that most pregnancies in Rh sensitized patients should be allowed to continue to term and go into labor spontaneously. The only exception to this possibly is in a patient who has previously delivered an erythroblastotic stillborn in which fetal death took place a few days before term. Such a patient may be a

candidate for pre-term delivery, that is in the 38th or 39th week, by induction of labor. This procedure has been recommended by Evans.

Preparedness for Erythroblastosis

In the majority of cases, if an Rh negative patient shows presence of Rh antibodies in the last six weeks of pregnancy, it is best to let her continue to term and go into labor spontaneously. 500 cc. of type O Rh negative blood which has been crossmatched with the mother and checked with a Coombs test should be ready for use, should the baby show signs of erythroblastosis. At time of delivery, a Coombs test, bilirubin, Rh and CBC should be obtained on cord blood of the infant. The umbilical cord should be left 3 to 4 inches long and wrapped in a saline soaked sponge so that its vessels can be used for transfusion.

Repeat exchange transfusions should be used if the bilirubin level increases, and it should be kept below 20 mgm %. This will prevent the development of kernicterus in the baby.

The question of breast feeding comes up at times in these Rh sensitized patients. Most of the authorities today feel that it is perfectly safe to allow the baby to be breast fed.

Prognosis of Future Pregnancy

Many people have reasoned that if an Rh negative woman gives birth to an erythroblastotic stillborn, then it is futile for her to hope to ever have a living child. Approximately 10% of the Rh positive babies will be normal after a patient has delivered one or more severely damaged infants.

Table 9 shows the outcome of subsequent pregnancies in 12 Rh negative women after they had been sensitized.

TABLE 6
Outcome of Erythroblastosis Caused by Rh Incompatibility

	1-1-45 To 10-31-46	11-1-46 To 3-31-49	4-1-49 To 6-30-51	7-1-51 To 6-30-54
Total Cases	78	199	257	139
Recovered, no sequelae	38-49%	153-77%	225-87%	125-90%
Kernicterus	26-33%	20-10%	4-2%	1-1%
Died, no kernicterus	14-18%	26-13%	28--%	13-9%
Cases per year	42	82	114	139
Kernicterus per year	14	8	2	1
Exchange transfusion	0	73%	86%	88%
Multiple exchange transfusion	—	0	20%	26%
Female Donor	—	16%	82%	88%
Gestation less than 38 weeks	50%	47%	25%	23%

A positive Coombs test makes the diagnosis of erythroblastosis. The appearance of jaundice, hepatosplenomegaly, pallor, petechia, hydrops, or a hemoglobin of less than 15 gms in the first 24 hours, with a positive Coombs test are criteria for exchange transfusion.

The work at the Boston Children's Hospital will show the superiority of exchange transfusion in the treatment of these infants. This is demonstrated in Table 6.

Mollison reported on a two year study done in twelve hospitals in Britain. He shows the superiority of exchange over simple transfusion and also the advantage of letting the patient go into spontaneous labor at term. This is demonstrated in the labor at term. This is demonstrated in Tables 7 and 8.

Is there any treatment that will reduce the sensitization once it occurs in an Rh negative patient? Hunter reported that administration of Cortisone and ACTH in the last part of pregnancy would increase the fetal survival. Others have not been able to confirm his work, and most investigators now believe that Cortisone or ACTH is of no help. The same can be said for Rh haptens. So at present there is no treatment for the Rh negative patient to reduce her sensitization.

TABLE 7
Over-All Comparison of Exchange with Early Simple Transfusion

	TOTAL	LIVING	DIED
Exchange	62	54	8 (13%)
Simple (early)	57	36	21 (37%)

TABLE 8

A Comparison of Premature Induction of Labor with Spontaneous Delivery

Treatment	Total Cases	Living	Neonatal Death	Stillbirth	Total Dying	Mortality
Induced	17	49	22	6	28	36%
Spontaneous	108	82	12	14	26	24%

TABLE 9

Outcome of Successive Erythroblastotic Infants Delivered by 12 Rh-Negative Women Following the Onset of Sensitization

Patient	1	2	3	4	5	6	7	8	9	10	11
BON.	S	S	K	D	S	K					
NEA.	D	R	R	R							
SCO.	K	S	S	S	S	R	R	R	S	S	R
LYD.	K	S	S	D	S	R					
DUB.	K	K	S	R	S	R	D	R			
WOR.	K	D	D	K	R						
ROG.	R	R	D	S	S	D	S				
SUL.	R	D	S	DD°							
HAM.	R	R	R	S	R						
CAS.	R	R	R	K							
CRA.	R	R	R	R							
BRA.	R	R	R	RR°	R						

S—stillborn, D—died without kernicterus, K—kernicterus, R—recovered

Summary

Every prenatal patient should be typed for the Rh factor. Those found to be Rh negative with Rh positive husbands, should be tested for anti-Rh antibodies in the last few weeks of pregnancy. If antibodies are found, then preparation should be made to carry out exchange transfusion of the baby. If facilities are not available for exchange transfusion, then the patient should be sent to a center where it can be done. A few hours delay in transferring the baby for transfusion will greatly increase the mortality. These erythroblastotic infants go bad very quickly, and they have their best chance if exchange transfusion can be started in 1-2 hours after birth. Should the bilirubin level rise, approaching 20 mgms %, then repeat exchange transfusion should be carried out to prevent the development of kernicterus.

The most important thing to remember in the management of an Rh negative patient during pregnancy is to anticipate trouble and be prepared to treat the infant with exchange transfusion. Have Rh negative type O blood ready to use immediately so that valuable time will not be lost. When the diagnosis of erythroblastosis is made as an after thought, the survival rate is very low.

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Practical Principles in Immunization in Infancy and Childhood *

J. C. PETERSON, M. D.**

Milwaukee, Wisconsin

While it was a temptation to take up some of the immunological studies which have occupied our interest during the last fifteen years, it seemed more appropriate to review some of the principles and practical points of application which are of significance in immunization in infancy.

Prophylactic immunizations include procedures involving different kinds of immunity, passive immunity, which I will mention and dismiss, wherein pre-formed antibodies are injected with the objective of preventing or modifying the course of a disease, and active immunity wherein deliberate infection or the injection of antigens is given for the purpose of stimulating the formation of antibody. It is this last type of immunizing procedure in which we will center our interest after a few brief comments.

Passive Immunization

Passive immunization is exemplified by the administration of tetanus antitoxin or the use of gammaglobulin in the prevention of measles, infectious hepatitis, poliomyelitis, in fact any disease to which adults commonly have an immunity and furthermore in certain patients lacking an ability to form their own gammaglobulin.

These examples of artificial passive immunization are distinguished from natural passive immunization, as noted in the immunization of the fetus against his own red blood cells in congenital erythroblastosis. This of course is a wholly undesirable natural passive immunization, and there are many examples of natural passive immunization which are wholly beneficial, such as the immunity against measles and a number of other common infections which is transmitted across the placental barrier to the fetus and which protects the newborn until he is better able to respond to infections.

Active Immunization

Active immunity may result from natural infections; the natural immunity that follows an attack of chicken pox. In this particular disease the natural immunity which results is of a very high order and persists throughout life, second attacks of chicken pox, being virtually unknown. On the other hand we have some infections which occur without stimulating a degree of immunity sufficient to protect the individual for more than a very brief period, for example in influenza or in the common cold. Finally we come to the consideration of artificial active immunization where immunity is developed by the systematic injections of bacterial vaccines, toxin or toxoids.

It is with this artificial active immunity that we are concerned in prophylactic immunizations in childhood and a brief statement about what can be accomplished is in order.

While some antigens are more effective than others in the stimulation of antibodies, the principles of their use are always essentially similar. Following the injection of an antigen into the body, two things occur. First, it stimulates the development of circulating antibodies, and the titer rise of these antibodies is an objective proof of the effectiveness of the procedure. Secondly, there develops in the individual an increased capacity to respond to subsequent injections of antigen, given after a suitable time interval. The ability of the individual to suppress the infection thereafter is the resultant of these two phenomena and whether the persistent presence of circulating antibody or the ability of the individual to respond to a new stimulus is of greater importance, is determined in all probability by the length of the incubation period of the natural infection with which one is dealing. If the incubation period is short it would be necessary to maintain persistent circulating antibody in order to suppress the infection. If on the other hand the incubation period is relatively long there would be ample time for the recall immunity to develop and suppress the infection.

Both the persistence of the circulating antibody and the intensity of the individuals recall capacity are dependent on the amount of antigen which is given with the primary immunization, but not necessarily to an equal degree. For example, an in-

*Presented at the 1954 Annual Meeting of the Kentucky State Medical Association at Columbia Auditorium, Louisville, September 21-23.

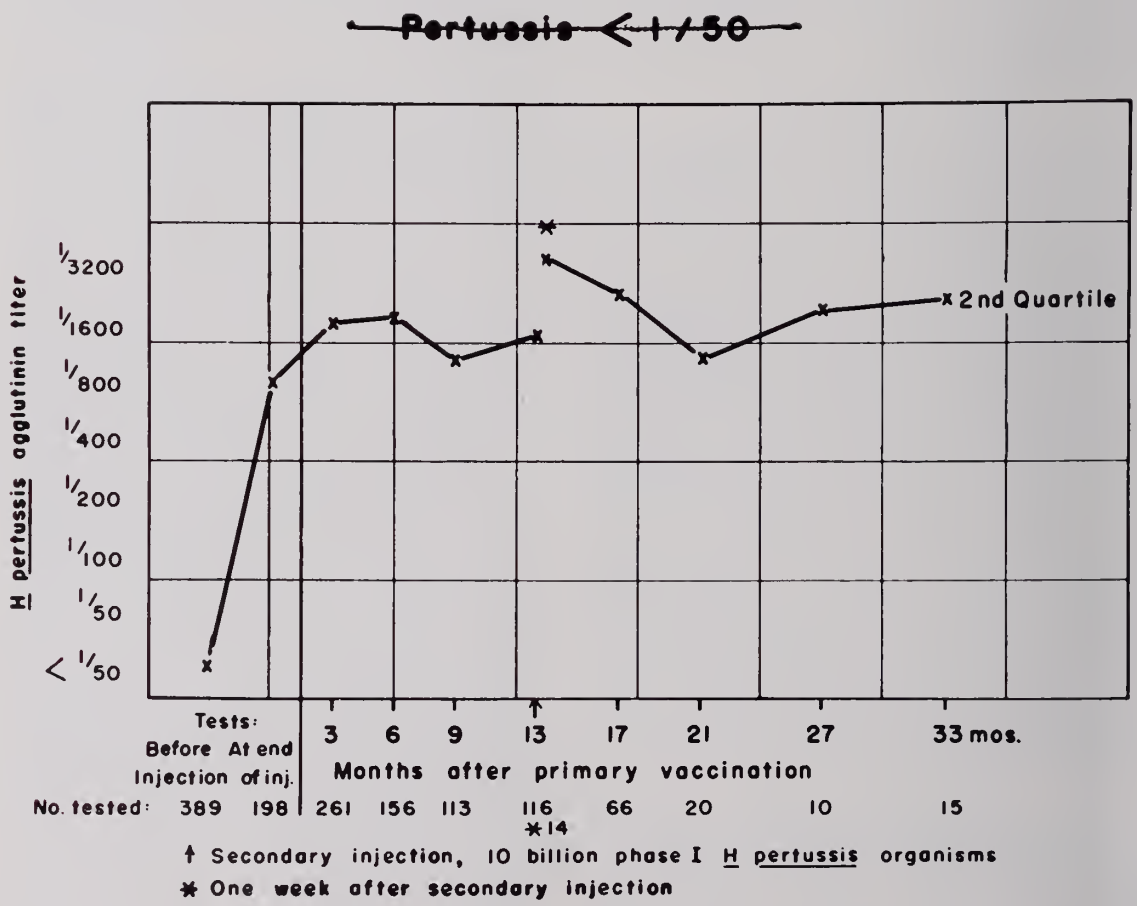
**From the Department of Pediatrics, Marquette University School of Medicine and the Milwaukee Children's Hospital.

dividual may produce relatively low levels of antibody and still be sensitized adequately to respond well to a booster injection. In any event it is important in the primary immunization procedure to give relatively large amounts of antigen to provide a high order of serologic response and to sensitize adequately the recipient to recall stimuli while with recall immunizations small fractional doses will usually suffice to elicit a satisfactory response. This effectiveness of the recall immunization is shown in figure 1, in which it is apparent that the antibody response to the booster is superior to that seen following the basic immunization.

With the exception of small pox vaccination, when the individual is given a significant infection which advances until it is suppressed by the individual's immune responses, our routine immunization procedures are governed to some extent by expediency. The immunologist is torn between the desire and need for giving large amounts of antigen and his fears that the injections will produce intolerable immediate reactions. Sometimes our procedures are inadequate because we attempt to avoid reaction. This should not be interpreted to mean that reactions are desirable. Every possible measure should be used in the preparation of vaccine to eliminate those reactions which result from the inclusion of extraneous materials not essential to antibody production or sensitization. On the other hand the mere fact that a vaccine can be given without fear of the reaction does not mean that it is the best or even a good vaccine.

While in the past, some totally impotent

FIGURE I



Here is shown the median response of infants immunized with pertussis vaccine. The first part of the curve—to 13 months—is the primary vaccination. The second portion of the curve represents the levels after a booster injection equivalent to 1/6 the vaccine given in the primary vaccination. The superiority of the response following the booster is clearly indicated.

vaccines have been marketed, the National Institute of Health now affords us some protection against inadequate vaccines by insisting that those for communicable disease prophylaxis have ascertained minimal antigenic potencies. However, there are still wide margins within which a manufacturer can work and some vaccines are much more effective than others.

Early Immunization

One of the most important questions in immunization is the question of the preferred age for giving the immunization. Until a few years ago it was thought that infants had almost no capacity to respond to immunization procedures and that if such procedures were carried out in early infancy they would be totally ineffective. Now it has been demonstrated quite conclusively that infants do have a capacity to respond to immunization procedures, that adequate responses can be obtained at any time from the neonatal period on. It is equally true that as the infant grows older there is a greater capacity to respond and that the response is attained more quickly, but this is not an all or none proposition. It does seem that in early infancy a relatively larger dose of vaccine is required to produce a given response. This need not discourage early vaccination because it has also been shown that infants have less adverse reactions to the injection of the vaccines and can tolerate relatively larger amounts of antigen than older children and adults.

With adequately formulated immunization programs the primary immunizations can be started at any time from a few weeks of age on, but one may question if it is truly desirable to give young infants vaccinations. I think the answer is definitely yes. First, early immunization yields protection during early infancy, during the early months of life when pertussis can cause such tremendously serious morbidity and mortality. This point may also be of considerable importance in diphtheria immunization nowadays, as the continuously declining level of immunity in the adult population due to the lessened prevalence of diphtheria in the community increases the number of infants who are no longer afforded passive protection from their mothers. Secondly, early immunization is desirable because, as I have mentioned, infants respond with fewer and less serious adverse reactions to vaccination procedures than do older individuals. The difference between the infant of 2 weeks of age and the infant of 6 to 8 months of age is probably not significant with respect to physical reactions, but in an infant of 6 to 8 months of age the emotional reaction to immunization procedures is much more marked than it is in the first few months of life. This is important from the viewpoint that such emotional stresses may be of real importance to the child's later emotional adjustments.

Patient Reactions

At this point we might consider how to deal with patient reactions. Education of the parent is the best method of dealing with the possible reactions which immunizations may cause in their children. If the mother is adequately prepared as to what reactions her child may have, they become relatively less significant. The mother who knows that her child is likely to have some fever following the vaccinations is not going to be panic stricken with the development of that fever, especially if she has already been told what to do.

The reactions to immunizations fall into two groups, those which are localized to the site of the injection and systemic reactions.

Local reaction results from several factors, first, the material is a foreign body and causes a foreign body reaction; second, the material may be contaminated with organisms capable of producing low grade inflammatory reactions and third, some individuals are more responsive than others to such reactions. Fourth, the use of adjuvants such as potassium alum, or aluminum hydroxide or aluminum phosphate also tends to increase the local reactions. In earlier days when relatively larger amounts of potassium alum were used this material undoubtedly contributed to many local difficulties. The lack of precise sterilizing and aseptic techniques in the handling of syringes, needles and vaccine bottles, contributes to the contamination of vaccines. All syringes for use in vaccinations should be sterilized by autoclaving or by dry heat. This involves a greater outlay of equipment for carrying out immunization procedures, but in the long run does not materially increase the costs. Many doctors and nurses thoughtlessly contaminate the plunger of the syringe in the filling procedure. The risk of local abscess formation following vaccination is lessened when the material is injected intramuscularly, but at the same time the absorption is faster from the muscular tissues and systemic reactions are enhanced with this route.

Systemic reactions, fever and malaise, following the vaccination can be greatly minimized by the simultaneous administration of small amounts of aspirin. A dose of 75 mg. of aspirin for infants is a safe, effective way to counter these symptoms. When necessary, a second dose can be given, after an interval of 4 hours. If the febrile reaction is extreme, it is desirable to modify subsequent doses of vaccine in such a way as to cut down on the reaction. Give more injections rather than run the risk of an unfavorable response. These reactions have been reduced by manufacturing processes which eliminate many fever producing factors.

Convulsions may occur as one form of reaction to immunizations. Fortunately such reactions are rare and special consideration for cases which may have a convulsion will tend to minimize this risk. In dealing with children known by family history or past experience to be liable to febrile seizures aspirin may be combined with 8-15 mg. of phenobarbital as a prophylactic measure. If a convulsion does occur it is well to discontinue immunization temporarily and to start with marked modification of the program, using fractional doses of vaccine and using separate rather than combined antigens.

In the past some authorities have stated that brain injury in the child is a contraindication to the administration of prophylactic immunizations. This is not a justifiable attitude, children who have brain injury with or without seizures should have the benefit of prophylaxis against infectious diseases. Such patients are just as susceptible to further brain injury from the infectious disease and would be more likely to get into trouble from the infection than they would from the vaccination procedure. In such patients it may be desirable to individualize the procedure, using more, smaller injections and possibly using individual antigens. The pertussis antigen and disease, are more likely to evoke unfavorable reactions in this group of patients.

Contraindications

There are a few definite contraindications to vaccination and first and foremost of these is the presence of other infections. It is highly undesirable to give a child an injection of vaccine when he has an intercurrent infection as this greatly enhances the likelihood of severe reactions. This is especially true in the invasion stages of infections when such an addition may result in a severe reaction and convert a relatively benign infection into a severe one by altering the patient's response to his infection. Care should also be taken to avoid immunizations after known exposure to infections as the immunization would increase the chances of developing the infection or increase its severity. In recent years it has been pointed out that intramuscular injections of vaccine given to patients exposed to poliomyelitis increases the likelihood of the patient developing a paralytic reaction in the extremity injected. It is now customary to avoid prophylactic immunizations when a community is experiencing an increased prevalence of poliomyelitis.

Additional contraindications are seen with respect to smallpox vaccinations. No child should receive smallpox vaccination at a time when he is suffering from a generalized skin reaction such as eczema. The presence of such a skin disease in any other member of a child's family would also be a contraindication to vaccination because of the dangers of cross infection.

Timing Repeat Injections

The optimal time interval between injections has never been precisely determined, but it is certain that relatively long periods, four to eight weeks are superior to shorter intervals. Intervals up to six months do not seem to lessen the antibody response. If one must choose between four weeks and eight week intervals, it would probably be better to choose eight weeks. A six week interval has been the time which we have utilized in our experiences.

The question of the number and timing of booster injections is also a moot subject at this time. No hard and fast rules can be laid down concerning booster immunizations, except that all infants immunized in the first six months of life should have a booster injection some time during the second year of life. It would probably be desirable to give an additional booster immunization some time before the child is exposed to a marked change in environment, for example, before starting kindergarten or school. The need and optimal time for subsequent booster injections has not yet been clearly elucidated. However, the development of an epidemic in a community should serve as a signal for restimulation of active immunity in those individuals previously vaccinated more than 5 years before, among older individuals or more than 3 years before among young children.

Responsibility for Vaccination

Finally we come to the question as to who should be responsible for vaccination procedures. In communities with a relatively low saturation of medical care it has been customary for most immunizations to be carried out by public health authorities. Such programs have the advantage of providing a more uniform administration of the immunization procedures. In a community with a higher degree of saturation of medical care it is quite possible for immunization programs to be carried out adequately by the practicing physician and under those circumstances the individual who is responsible for the general health supervision of the child should carry out the vaccination procedure. For example, in Delaware in 1953, 70% of the infants under one year of age were vaccinated and 85% of these immunization procedures were carried out by the family physician, a highly desirable situation. Even there, however, the performance could have been improved.

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Giant Pseudomucinous Cystadenoma

CHARLES C. KISSINGER, M.D. F.A.C.S.

Henderson

In this modern age of "Medical Miracles" as publicized in numerous lay periodicals and with an ample supply of well-trained physicians in most communities, rare indeed is the woman with enough "Doctor-Resistance" to harbor a large abdominal tumor. As a result, giant ovarian cysts are almost a rarity in private practice. However this was not always the case. As a matter of fact Ephraim McDowell's removal of a 22 lb. ovarian cyst from Mrs. Thomas Crawford at Danville, Ky., on Christmas day 1809 might be considered as the beginning of the modern era of Surgery, in that he was probably the first to open deliberately the abdominal cavity and remove a tumor which he knew would otherwise have killed his patient. McDowell went on to perform eleven more such operations in his lifetime. The operation became increasingly commonplace thereafter and indeed almost became established as a specialty by some practitioners. Spencer Wells of London became the great ovariotomist of his time, performing one thousand such operations between 1858 and 1880. In the present era, ovarian cysts present no problem of any great magnitude but unusually large cysts remain a medical curiosity.

The largest of ovarian cysts are usually pseudomucinous cystadenomas. Spohn[1] reported one weighing 378 pounds. Strickland[2] encountered a 160 pound pseudomucinous cystadenoma, and Rowan[3] and Kidd[4] have reported ovarian cystomas weighing 51¾ pounds and approximately 174 pounds respectively. Johnson and Michaels[5] successfully extirpated a 71 pound papillary serous cystadenoma.

Case Report

Mrs. O. P., 35 yrs. old white female, Hosp. No. 24903 was admitted to the hospital 11-29-54 because of progressive abdominal enlargement. She stated that she had first noted a "swelling" in her abdomen about 2 yrs. previously which had gradually enlarged. During the two months preceding admission, the abdominal enlargement had increased at a much more rapid rate and she had noticed some swelling of her ankles. There had been no interference with bowel or urinary functions. The family history was noncontributory and she had enjoyed good health all of her life up until the present illness. She had had a single pregnancy 10 yrs. previously which resulted in a normal full term female infant. Her

menses had always been erratic, occurring at varying intervals and lasting for varying lengths of time. However, she had "spotted" almost continuously during the two months prior to admission to the hospital.

Physical examination revealed a well developed, well nourished, middle aged W. F. 5'3" in height and weighing 188 lbs. She was in no obvious distress. The abdominal enlargement which was considerably greater than a full term pregnancy gave her a grotesque appearance. The temperature was 98.8, the pulse 80, and B.P. 140/100. No abnormalities of the head and neck were noted. Examination of the chest revealed normal female breasts with no evidence of neoplasia. No lymphadenopathy was noted. Both pulmonary fields were clear to percussion and auscultation. The precordium was normal in outline and no arrythmias or murmurs were noted. The abdomen was almost spherically enlarged from the xiphoid process to the symphysis pubis. It measured 48 inches in circumference at the umbilicus. The skin was tense and shiny with pitting edema being present. A dull sound was obtained on percussion and no bowel sounds could be heard. The consistency of the mass on palpation gave the impression of fluid contents although there was no bulging in the flanks and no fluid wave could be obtained. Pitting edema was present in both lower extremities. Pelvic examination gave a sense of fullness in the pelvis although the tense abdominal mass could not be palpated. The uterine corpus was of normal size, in a retroverted position, and freely movable. The adnexa could not be palpated.

Her blood count was 4,100,00 RBC with 12.25 Gm of Hb. The white count was 8,000 with 61 segmented polymorphonuclears, 6 stabs, 2 eosinophiles and 35 lymphocytes. The urine was cloudy, light amber in color, and acid in reaction with a Sp. Gr. of 1.030. There was a heavy trace of albumen, Benedict's test for sugar negative. A few epithelial cells and a moderate number of bacteria were noted on microscopic examination. An X-ray was taken of the abdomen but it was not of diagnostic quality.

A preoperative diagnosis of ovarian cyst was made and the patient was subjected to a laparotomy on 11-30-54. A midline incision was made from the umbilicus to the symphysis pubis. The entire abdominal cavity was found to be filled with a huge cystic structure which rode up above the true pelvis and reached the costal cage where it was rather densely adherent to the anterior abdominal wall and falciform ligament. The wall of the cyst was composed of a rather thick gray membrane through which coursed fairly large vessels. An incision was made through the wall of the cyst through which gushed a cloudy white semi-gelatinous fluid. All possible efforts were made to prevent spillage into the peritoneal cavity. The cyst was found to contain many loculations, a number of which were broken up in order to aspirate more of the contents. Many of the loculations contained small red colored bossellated tumefactions of varying size. After sufficient fluid had been aspirated, the adhesions to the anterior abdominal wall and falciform ligament were severed and the entire structure was delivered through the abdominal wound. It was then seen that the cyst had originated from the right ovary. Its relatively small pedicle was severed between ligatures and the entire structure delivered as an operative specimen. The patient's postoperative course was entirely uneventful.

FIGURE 1

Fig. 1 is a photograph of the specimen after its cavity had been filled with water. It was found impractical to measure its capacity or weight since it was impossible to refill the structure to its original tenseness. The patient's immediate postoperative weight was 137 pounds as compared with her preoperative weight of 188 pounds, or a difference of 51 pounds.

The microscopic diagnosis as made by Dr. A. P. Bennett, consulting pathologist to the Methodist Hospital, was Multilocular, Papillary, Pseudomucinous, Cystadenoma of the right ovary, thought to be histologically benign or of very low grade of activity.

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Some Aspects of Carbohydrate Metabolism *

JAMES ROBERT HENDON, M.D.**

Louisville

No vital process can be viewed as operating independently in the living organism. Consideration of carbohydrate metabolism must, of necessity, implicate that of other foodstuffs, of electrolytes, of the metabolic phenomena of the body as a whole. It is obviously not possible to deal adequately with such a massive subject in the time available. It may be profitable, however, to review some of the agents and mechanisms which influence the fate of sugar in the body. Since most internists must be concerned with the diagnosis and treatment of diabetes mellitus, it will be expedient to present this review against the background of that disorder.

Factors Influencing Blood Sugar

Since the demonstration that unresponsiveness to hyperglycemia can be produced by extirpation of the pancreas and the later discovery of insulin and its hypoglycemic action, it has been tempting to view regulation of the blood sugar in toto (in the diabetic or normal state) as a simple question of adequate or inadequate insulin supply. Not only is such a view untenable, but it tends to obstruct progress toward the solution of the problem of diabetes.

In a discussion of diabetes mellitus and the control of blood sugar, it must be admitted that the diabetic state which is precipitated by pancreatectomy or other experimental means is not identical with that which arises spontaneously in man and animals. And, in fact, differences exist and can be demonstrated between types of clinical diabetes. It is stimulating, however, to examine the agencies and factors which influence blood sugar control. Thus excellent illustrations are afforded of the interdependence of function of the organs of internal secretion, as well as the intimate relationship which exists between the endocrine and the other systems of the body. There is also obtained a sense of the quantitative relativity of vital phenomena. Thus, while the hypoglycemic action of insulin is definitely established, it is this action in relation to opposing, assisting and neutralizing actions which determines the level of the blood sugar.

The factors influencing blood glucose will be considered as belonging to endocrine or non-endocrine categories. Some of the latter may be pre-hormonal; some are extra-hormonal.

The participation of the adenohypophysis in carbohydrate metabolism has been known for several years. Hypophysectomy in the diabetic or normal animal will decrease the blood sugar levels markedly and will greatly increase sensitivity to insulin. On the other hand, injections of hypophyseal extracts can, in certain animals, produce a diabetic state which persists after cessation of the injections. Or, if diabetes be already present, the injections will increase the hyperglycemia and glycosuria. It has been postulated that the hypophyseal hormone acts by inhibiting hexokinase which catalyzes the first step in the metabolism of glucose; this concept has not been fully confirmed.

Anterior Pituitary Hormones

There are six known hormones of the anterior pituitary gland: the growth hormone, (G.H.), the adrenocorticotrophic hormone, (ACTH), the thyrotrophic hormone, (T.S.H.), the lactogenic hormone, the follicle stimulating hormone (F.S.H.) and the luteinizing hormone (L.H.). The possible diabetogenic action of all of these has been investigated, and it has been established that only ACTH and the growth hormone (G.H.) produce significant hyperglycemia. However, ACTH is ineffective in the absence of the adrenal cortex. Therefore it is at present felt that G.H. or some closely related X-hormone is the insulin antagonist of the anterior pituitary gland. Its diabetogenic effect can be demonstrated in the absence of the hypophysis, the thyroid, the adrenal glands, or the gonads. Some features concerning its action remain to be clarified. For instance it is not effective in certain species: man and some other animals are quite resistant to its hyperglycemic action; the factor of age enters, for while it produces hyperglycemia-unresponsiveness in adult dogs, it does not have this effect in puppies.

*Read before the Kentucky Chapter of the American College of Physicians at the 1954 Annual Meeting of the Kentucky State Medical Association at Columbia Auditorium, Louisville, September 21-23.

**Assistant Clinical Professor of Medicine and Chief, Section on Endocrinology, University of Louisville School of Medicine.

The relationship between excessive G.H. production and diabetes may be seen clinically in acromegaly. In this condition diabetes exists much more frequently than in the general population. The hyperglycemia is usually insulin resistant, and can be attenuated by the administration of large amounts of estrogens or effective measures against the hypophyseal tumor.

As has been stated, ACTH affects carbohydrate metabolism only by virtue of its stimulation of adrenal cortical steroids. These steroids, notably Compound E (cortisone) and Compound F (hydrocortone) accelerate the catabolism of protein, increasing the production of sugar therefrom; they also decrease the utilization of carbohydrate by the tissues.

Although the action of these glucocorticoids and that of G.H. might, at first glance, seem identical, definite differences exist. G.H., for instance, builds protein and makes for a positive nitrogen balance; the glucocorticoids catabolize protein and produce negative nitrogen balance. Both hormones are ketogenic, but the pituitary factor exerts this effect much more so than the adrenal.

The clinical demonstration of excessive glucocorticoid effect is seen in the Cushing Syndrome, whether this disorder be due to excessive ACTH stimulation of the adrenal glands or to primary cortical adenoma. The basic metabolic disturbance in this disease is increased protein catabolism; hyperglycemia is usually one of the results.

One of the effects of ACTH, cortisone, and hydrocortone administered therapeutically has been loosely referred to as "diabetogenic." Since a permanent hyperglycemic tendency has never been produced by such administration, it would be well if this term were avoided.

Epinephrine Effect

Epinephrine, one of the hormones of the adrenal medulla, promotes hyperglycemia by accelerating the breakdown of glycogen in liver and muscle. It is probable that it also stimulates ACTH secretion through humero-neural pathways, and so leads to greater glucocorticoid production.

Clinically the resulting hyperglycemia is seen in patients with tumors of chromaffin tissue, particularly in those in which hypertension and other symptoms are continuous rather than paroxysmal.

Thyroid Hormone

The thyroid hormone plays a minor but definite role in carbohydrate metabolism. Its presence, in excess, accelerates the absorption of glucose from the intestinal tract; and there may be, as well, an hepatic glycogenolytic effect. Experimentally, one may produce diabetes in a partially pancreatectomized animal by the feeding of thyroid, and mild alloxan diabetes may be prevented or suppressed by administration of antithyroid drugs.

Clinical diabetes may mask thyrotoxicosis. In such cases adequate antithyroid medication or thyroidectomy may abolish hyperglycemia and glycosuria. Myxedema, on the other hand, is characterized by a flat oral glucose tolerance curve. The shape of the intravenous glucose tolerance curve is normal.

Sex Differences

If rats are subjected to sub-total pancreatectomy, more than three times as many males will develop diabetes as females. In such animals protection against hyperglycemia is afforded by estrogen therapy while treatment with androgens increases the incidence of diabetes. The sexual difference is noted even among adult animals castrated before pancreatectomy. However, if castration is performed quite early in life and the pancreatectomy done later, the incidence of diabetes is about the same in both sexes.

Among humans no difference in the sex incidence of diabetes is seen until after the age of fifty when it becomes more frequent in women than in men. In general, estrogenic treatment of diabetes has not been profitable, although there have been reports of estrogen effectiveness among women who developed diabetes at the menopause. As stated before, estrogen therapy apparently has attenuated diabetic severity among acromegalies.

Although glycosuria has been reported to occur after parathyroidectomy no definite effect is known of the parathyroid hormone on carbohydrate metabolism.

Insulin and Glucagon

Almost since the discovery of insulin it has been known that it contains a fraction or a substance the effect of which is hyperglycemic. Evidence has indicated that a transient elevation of blood sugar, seen after insulin administration, is due to an hepatic glycogenolytic effect. This hyperglycemic-glycogenolytic factor called HGF or glucagon is distinct from insulin and can be recovered in pure form. The site of its origin is in dispute. Much evidence indicates that glucagon is elaborated by the

alpha cells of the islands of Langerhans, while the beta cells produce insulin.

The physiologic significance of glucagon is not known. Most endocrine problems are concerned with too much or too little hormone effect. With the possible exception of the entity of idiopathic or familial hypoglycemia seen occasionally in children, there are no clinical syndromes of hyper- or hypo-glucagonism. It is quite unlikely that diabetes mellitus is a mere matter of imbalance between H.G.F. and insulin production.

Thus it is seen that, with the exception of insulin, all or nearly all of the hormones known to affect carbohydrate metabolism have a hyperglycemic effect. In opposition to this action is insulin, produced by the insular beta cells, and known to have these functions: Insulin greatly facilitates the transformation of glucose to glycogen, although glycogen synthesis can proceed to some extent in the absence of insulin. Insulin also favors the transformation of glucose into fat, and of amino acids into protein. Finally, insulin enhances the ability of the tissues to oxidize glucose to carbon dioxide. The intimate details of the action of insulin, as well as that of the hyperglycemic hormones are not known. Two concepts are currently in favor. One is that insulin favorably influences the catalytic action of hexokinase in the phosphorylation of glucose to glucose-6-phosphate. The other is that insulin facilitates the passage of glucose into tissue cells and into subcellular structures within the cells.

Non-Hormonal Factors

Many non-hormonal factors affect the level of the blood sugar—and therefore carbohydrate metabolism. An hereditary predisposition to diabetes mellitus is established clinically. It has been possible to breed a strain of mice, members of which show obesity, hyperglycemia, hypercholesterolemia, and resistance to insulin, a quadrad common in clinical diabetes. Although among these animals the central nervous and the endocrine systems show no abnormalities, experimental evidence indicates that here, at least, the primary genetic lesion is hypersecretion of HGF by the alpha cells.

Puncture of the floor of the fourth ventricle has long been known to produce hyperglycemia; other types of brain injury have the same effect, and this may occur in the absence of the hypophysis.

In perhaps another category the stress of emotional shock or conflict, trauma, or infection may serve to precipitate a state of hyperglycemia unresponsiveness or to enhance the severity of diabetes already established. It is possible that these agents set off a chain of metabolic events, known as the general adaptation syndrome, implicating the liberation of increased amounts of adrenocortical hormones.

It has long been known that the liver is the principal source of the blood glucose, other than that which is absorbed directly from the intestinal tract. If the liver be damaged by disease, by chemical agents or by starvation, the normal regulation of blood sugar fails, even though adequate supplies of insulin be present.

The Significance of Multiple Mechanisms

Thus are indicated the many mechanisms which influence the control of blood glucose in man and animals. The situation is not to be viewed as a tug-of-war between insulin on the one hand, and the hyperglycemic factors on the other. Rather, it may be likened to conditions within an aircraft where the gentle, coordinated manipulation of many controls serves to keep the plane in flight and on course in spite of strong horizontal and vertical currents in the air outside.

It is suggested by these considerations that diabetes mellitus and hyperglycemia-unresponsiveness are not necessarily synonymous, that either may be many things. It must be admitted that we do not know at present what diabetes mellitus is. We must admit, too, a tendency among us to be content when a diagnosis of diabetes mellitus has been made by establishing the fact of persistent hyperglycemia, and to put into use, without more ado, the excellent instruments of diet and insulin. By popular—and sometimes enthusiastic—consent, diabetes is known as a controllable, but incurable, disorder. The "diabetes" resulting from a pheochromocytoma, however, disappears when this usually benign tumor is removed, as may hyperglycemia associated with adrenal cortical adenoma. The "diabetes" of Cushing's Disease or acromegaly, thyroid or hepatic disorder may be dissipated by appropriate measures.

Although our present grasp of the total situation is incomplete, it will be expedient, and profitable to some of those we

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CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

Treatment of a Manic Depressive Reaction, Depressed Type, Complicated by Coronary Artery Disease and Myocardial Infarction

A 71 year old white male semi-retired school teacher was admitted to this hospital on 27 August 1954 with the chief complaint of being completely exhausted, depressed, and quite impatient with his own inability to function in a normal manner.

The present illness is dated back to a little over two months before admission, up to which time he had been feeling well and working with his usual zest. Then returning from a morning's fishing, when starting to eat lunch, he complained of being ill and went to bed. His usual "heart tablet" afforded no relief. His private physician was called and he was taken to a private hospital by ambulance. At that hospital a diagnosis of coronary insufficiency without infarction was made and the ECGs bore out this clinical impression. About midway in this 25-day hospitalization he began to be depressed, complained of extreme exhaustion and exhibited great impatience with his inability to feel well. At the end of his hospitalization the ECG showed no change and inasmuch as he was considered a poor general risk for cerebral stimulation (electroshock therapy) he was discharged to his home on 100 milligrams of Thorazine q.i.d. Following his discharge his exhaustion continued and he became increasingly aggravated and irritated because he could not return to his former level of activity. His sleep became more disturbed. He became restless, constantly pacing the floor, and had a poor appetite with a good deal of vomiting. He complained of tension mounting and of feelings of impending death. With the appearance of expressed suicidal impulses he was admitted to this hospital. Past history showed that for 17 years he had had a mild case of diabetes mellitus which was controlled by diet. He had had a depressive reaction in the summer of 1944 lasting a little over two months but which was easily terminated by cerebral stimulation. ECG at that time showed some left axis deviation. He functioned well then until the fall of 1946 when he was admitted in a depressed and somewhat agitated state and again responded well to cerebral stimulation. From the time of his last discharge in December of 1946 he apparently had remained well until 1952 at which time he had some degree of cardiac decompensation. The ECG at this time showed an old posterior myocardial infarction.

On the present admission the patient showed a fairly typical agitated depression with restless, impatient pacing, subjective feelings of hopelessness and futility, and many feelings of self-incrimination. Physical examination: B. P. 132/76. Pulse 80, regular and full. A grade one systolic apical murmur was heard. There was no cardiac enlargement Aside from some degree of immature cataract formation, senile keratosis and an incisional hernia, the remainder of the examination was within normal limits. Routine chest x-ray was reported as being normal. From admission on 27 August 1954 to discharge on 19 December 1954 he had a very rough and stormy course with a great deal of anxious, tense pacing. In an attempt to afford him some rest and sleep, he was given Thorazine, chloral hydrate, and paraldehyde. His diabetes was easily kept under control by special diet. He showed no real improvement and it was decided to discharge him for a trial visit at home. There, although in the first 24 hours he did well, he became rapidly more agitated and depressed and was readmitted four days after discharge, on 23 September 1954. He continued to lose weight, was extremely discouraged, anxiously pacing to and fro and complaining of precordial pain and impending death. ECG continued to show an old posterior wall infarction. After consultation with the cardiologist, anesthesiologist, and the surgical department, it was decided that controlled cerebral stimulation would be less threatening to this patient's cardiovascular disease than would his continued physical overactivity. Therefore with the acquiescence of the cardiologist, the anesthesiologist took over, psychiatrists administered the cerebral stimulation, and the surgical cardiac arrest team stood by. As

a result of this cooperative effort the patient was able to receive 18 successful cerebral stimuli without untoward results. He improved somewhat and was sent home on a trial visit on 10 October 1954 but became restless in several days and was readmitted for further treatment. On this occasion he received a total of 23 cerebral stimuli by this method and was discharged on 13 December 1954. Since that time he has had some ups and downs and one bout of cardiac decompensation from which he successfully recovered.

Comments

S. Spafford Ackerly, M.D.: The problem here was not that of diagnosis nor recommended treatment but rather the problem of being able to administer that treatment which is most efficacious in the particular illness. As is shown, there were several complicating factors and the easier road was followed until, in our judgment, much greater harm was being done by the agitated depression than would be done by a modification of the most desirable treatment. This seems to us to show again the need for psychiatric beds in general hospitals where such invaluable assistance as that which could be furnished by the staff of anesthesiology, cardiology, and even if need be the standby cardiac arrest team from surgery. It also shows the results which can be obtained through the cooperation of such a team effort, for without this help we would not have been willing or able to give this patient a treatment which in our opinion was definitely a calculated risk when administered to a patient with an old myocardial infarction. Since Dr. Bergner supervised the anesthesiology I should like to ask him to introduce the modifications.

Robert P. Bergner, M.D.: After all preparations for shock are made, an amnesic dose of sodium pentothal is injected intravenously followed by a paralyzing dose of Succinylcholine (anectine) by intravenous drip. At the same time, using an anesthesia apparatus, artificial respiration with oxygen is started and is continued through the electroshock and until the patient is awake and breathing normally.

Question: What preoperative preparation is necessary?

Dr. Bergner: Atropine is used to prevent the excessive salivation and bradycardia sometimes seen with electroshock therapy. The stomach must be empty of food for eight hours and liquids for four hours.

Question: Why do you use sodium pentothal and Succinylcholine?

Dr. Bergner: Sodium pentothal is used in amnesic (not surgical anesthetic) doses to avoid the terrifying sense of suffocation when a curare-like drug exerts its effect. It also prevents the generalized conclusive-like twitchings seen during the onset of action of succinylcholine. Succinylcholine, a curare-like drug is ordinarily metabolized as rapidly as is acetylcholine, and by the same enzymes. The action is evanescent, and is expected to wear off within a few minutes after the intravenous drip is stopped. The patient is usually apneic during its action.

Question: Isn't this the kind of case in which Thorazine is supposed to be a big help?

Dr. Ackerly: Yes, but as a result of our experience with this drug in depressions we have not been able to be as enthusiastic as some of our colleagues. It has not raised the mood, and it can retard the thinking still more.

Question: Can anyone administer this type of anesthesia?

Dr. Bergner: Anyone *can*, but the results are not likely to be good unless this person is used to evaluating cardiovascular function under stress, has considerable judgment in the use of pentothal in poor risk patients, is accustomed to a paralyzed and apneic patient, and can manage artificial respiration so that optimum ventilation and minimal circulatory disturbance will be seen.

Question: Would congestive heart failure be a contraindication to cerebral stimulation?

Walter S. Coe, M.D.: No, mild to moderate congestive failure per se would not be a contraindication. In a case of severe congestive failure an effort should be made first to establish compensation.

Question: From the standpoint of the heart, wouldn't insulin be a safer means of shock therapy?

Dr. Coe: With a marked fall in blood sugar epinephrine is released by the adrenal glands. It is known that epinephrine increases the work of the heart and that the myocardium becomes more irritable. Studies have shown that coronary blood flow may be increased with epinephrine but the work of the heart is increased out of proportion to this increased coronary flow. As a result the myocardium becomes relatively anoxic.

Question: What are the hazards encountered?

DR. BERGNER: These are pharmacological, technical, and physiological. Pentothal is not entirely safe in patients with damaged hearts. An overdose can produce cardiac arrest. Technical hazards are numerous. Airways, laryngoscopes, and endotracheal catheters must be at hand. Oxygen apparatus must be functioning and tanks must be full. The oxygen mask must fit perfectly. The venipuncture must allow free flow of fluid and must remain patent. The breathing bag and breathing hoses must be in good condition. An extra breathing bag and set of hoses must be at hand in case those being used should tear. Preparations must be thorough since technical difficulties cannot be tolerated with an apneic poor-risk patient. Physiological hazards are circulatory, respiratory and gastrointestinal. Cardiac slowing and even arrest is not uncommon during electroshock. Normal heart action is ordinarily resumed when the shock is discontinued. If bradycardia persists, atropine is given intravenously. Arrest *has* persisted as long as 17 seconds, but cardiac massage has not yet been necessary. A surgeon, equipped with a "cardiac arrest" set of instruments must be standing by. Respiratory hazards are associated with the pentothal and with the artificial respiration. Pentothal can cause an acute asthmatic attack or a severe coughing spell in susceptible individuals. Too much positive pressure during artificial respiration can be harmful, since the lung will then not deflate and carbon dioxide will accumulate. There will also be interference with diastolic filling of the heart. The breathing bag must be lax except when the lungs are being inflated. Gastrointestinal complications are salivation and inflation of the stomach. Atropine hinders salivation, and correct pressures during inflation of the lungs minimize gastric distention with oxygen.

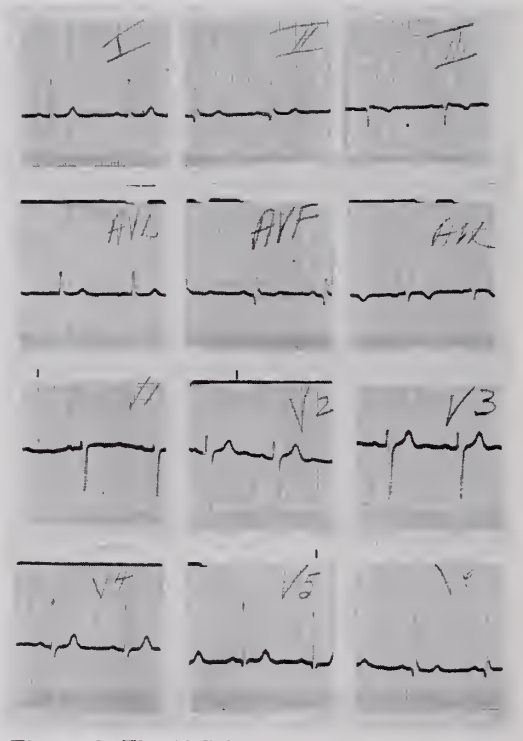

Figure 1. The E.C.G. reveals a deep Q wave in Leads 2, 3, A.V.F., and V_5 and V_6. These findings are consistent with an old posterior wall myocardial infarction.

Question: How long does it take to develop a firm scar in the myocardium following an acute coronary occlusion?

DR. COE: The process of repair in the infarcted area may go on for weeks to months depending upon such factors as the size of the infarct and the extent of collateral circulation.

Question: What about the danger of rupture of the infarcted area?

DR. COE: This is a real danger in acute infarction but this very rarely occurs with old infarcts. It is most likely to occur in the first two weeks following the acute occlusion.

Question: Why do you not insert an endotracheal tube to provide easier artificial respiration?

DR. BERGNER: Insertion or removal of an endotracheal tube is associated with dangerous cardiac reflexes unless the patient is well anesthetized. The hazards of deep general anesthesia, or thorough topical anesthesia of the larynx and trachea are greater than are the benefits of endotracheal intubation in the procedures under discussion.

Question: Can this treatment be used routinely?

DR. BERGNER: It can, but we prefer to reserve it for patients to whom shock would otherwise be denied.

Question: What are the indications and contraindications for surgical treatment of cardiac arrest?

JAMES C. DRYE, M.D.: It is most important that this procedure should not be brought into disrepute by improper use, for when indicated it is the only method by which the patient's life can be saved. It should not be used in patients dying as a terminal event of the natural course of such things as fatal kidney disease, congestive heart

failure, coronary occlusion, or severe uncorrected shock, etc. In general, it finds its greatest use in the patient undergoing surgery or some diagnostic procedure, whose heart either stops or starts a ventricular fibrillation for no apparent reason. Examples are the occurrence of this in patients undergoing standard abdominal operations such as gastrectomy, appendectomy, etc., or in the patient undergoing bronchoscopy. The causes of this occurrence are poorly understood, but it is frequently associated with anoxia, manipulation of the respiratory tract under light anesthesia, or manipulation of the structures at the root of the lung during thoracic surgical procedures. Brief periods of asystole occasionally occur during cerebral stimulation. In patients with anywhere near normal hearts this brief asystole is not dangerous and amounts only to a skipped beat or so. However, in this patient, who had had two coronary occlusions, one only a few months before, we felt that there was greatly increased danger, if asystole occurred, that his heart might not again pick up its normal rhythm. We did *not* prepare ourselves to do cardiac massage because we felt that he might "throw another coronary" under the shock therapy. It would have been of no use under such circumstances.

Question: Does chlorpromazine complicate this method?

Dr. Bergner: Yes. Chlorpromazine may greatly potentiate the action of the pentothal. It may also interfere with treatment of hypotension, if this should occur.

Question: Do you consider this treatment particularly hazardous?

Dr. Bergner: No. We have had much experience in managing this type of patient in surgery. This experience is directly transferable to medical patients. The hazard of death from the treatment, in our hands at least, is negligible compared to that from the symptoms of this particular psychosis.

SPECIAL ARTICLES

SOMEONE MUST PAY FOR THEIR CARE

GAITHEL L. SIMPSON, M. D.

The Kentucky State Medical Association's decision to make a study of indigent medical and hospital care within the state reflected recognition of the profession's obligation to offer leadership in all matters affecting the health of the patient, rich or poor. It was influenced by physicians' personal observations which led them to believe that, at least in part, present publicly supported programs providing medical services to the needy are inadequate.

Because of the importance of any policy by the Association regarding this problem, the K.S.M.A. Council felt a state-wide survey should be undertaken. The facts thus gathered would show whether observed deficiencies were merely isolated cases or were sufficiently common to call for a full revision in methods of providing medical care.

While the medical profession should provide leadership, it is obvious that ultimately adequate medical care for the needy is a responsibility of all citizens. It was felt that the survey would provide the facts. Should they show cause for strong recommendations, the data would serve to validate the Association's position and strengthen its efforts to enlist support from all groups.

As it has developed, the study clearly substantiates the view that the public agencies of most Kentucky counties are not at present adequately meeting the demand for indigent medical and hospital care. It has been recommended that legislation be introduced in the 1956 session of the Kentucky General Assembly to provide assistance to the local government agencies so that they may be able to meet their acknowledged responsibility in this field.

Survey Details

The American Medical Association Council on Medical Service, which has had wide survey experience, was asked in the beginning to assist in developing the study. Services of its staff members were also used throughout the two years spent in completing the project.

It was recognized at the outset that a

complete study of every county would be impracticable. It was decided to restrict the on-the-spot survey to a representative cross-section of the state.

James W. Martin, Ph.D., director of the University of Kentucky Bureau of Business Research, was engaged to select a group of counties that would be socially and economically representative of the whole state. On the basis of his statistical analysis and recommendations, the following 13 counties were designated as survey counties: Casey, Daviess, Estill, Hancock, Harlan, Lawrence, Marshall, Nelson, Ohio, Perry, Scott, Trigg and, because of its size, Jefferson.

A survey team consisting of representatives from the K.S.M.A. Headquarters staff and the A.M.A. Council on Medical Service staff visited the selected counties during the summer of 1953. It interviewed county and city officials, physicians, hospital directors, Department of Economic Security social workers and others concerned with indigent medical care.

Information was obtained from all 120 counties on the expenditures during the 1952-53 fiscal year by local government agencies for indigent hospital service, medical service, drugs, appliances, etc.

General hospitals throughout the state were requested to give information on their charity patient load during the same year. Replies accounted for approximately 69% of the then existing general hospital beds in the state.

Data obtained through these three major sources provided the basis for the study's conclusions. It is noteworthy that the state-wide picture obtained from public agencies in all counties and the general hospitals followed closely the pattern revealed by the survey of the 13 selected counties.

Financial Support Inadequate

In the majority of Kentucky's counties, the survey shows, the county and city governments are not providing adequate medical care for the indigent despite the fact that legislative action and court decision place such responsibilities on them. Instead the bulk of the care is provided by the hospitals, physicians, dentists and pharmacies.

Of the 13 survey counties, in only two— Jefferson and Scott— did public agencies clearly spend more for indigent medical care than was provided gratuitously by the institutions or persons actually rendering the service. In Jefferson County the indigent medical care expenditure from public funds amounted to $3.33 per capita. In Scott county the expenditure was $1.74 per capita. Whether the difference per capita between these two counties may be accounted for by differences in the extent of the service provided to each recipient, by differences in the costs for given services, or by differences in the percentage of indigent to the total population was not determined.

Daviess County spent $0.58 per capita from county and city funds for indigent medical care. The two general hospitals in the county reported gratuitous care together amounting to $1.00 per capita. Since these hospitals also serve indigent patients from surrounding counties and segregation of the two groups was not feasible, it was difficult to ascertain clearly the proportion of hospitalization expense which was borne respectively by public funds and the hospitals.

The Harlan County Court spent $0.23 per capita for all indigent medical care. Three hospitals in the county reported charity care amounting to $0.05 per capita.

The Trigg County Court made a flat contribution of $1,000.00 to the local hospital and an estimated $75.00 for drugs, which total averaged $0.13 per capita. The hospital reported it necessary to charge off as charity an amount averaging $1.87 per capita.

Two of the remaining eight survey counties made no provision from public funds for medical care of the indigent. The other six made token payments which ranged from $0.01 to $0.08 per capita.

Doctors of medicine in the survey counties were requested to keep special records of their fee reductions and free service during the single month for use in the study. In the 12 counties, exclusive of Jefferson, such reports from 55% of the physicians show that they provided gratuitous medical care for a single month with a value of $14,432.00. An extrapolation of these figures, if the survey month is considered average and the doctors reporting as representative, shows free service amounting to approximately $1.03 per capita. In Jefferson County, which has an extensive publicity supported indigent medical care program, 139 physicians reported gratuitous care during one month amounting to $29,032.40.

For the state as a whole the inadequacies of public financial provisions for indigent medical care were shown by information obtained from all 120 counties.

The state-wide expenditure from county and city funds for indigent medical care was $2,182,573.92 during the 1952-53 fiscal year, an average of $0.90 per capita. The state-wide expenditure exclusive of Jefferson County was $449,089.90 or only $0.19 per capita. These figures include all types of services.

An extrapolation of replies received from general hospitals in response to a questionnaire sent throughout the state indicates that they probably provide charity care, for which they are not reimbursed, amounting to approximately $1,376,-193.16 per year, an average of $0.57 per capita if Jefferson County is excluded. This figure added to the probable physician contribution of $1.03 per capita represents a total of more than eight times the amount spent by the 119 counties.

In 18 counties no payment was made from public funds for indigent medical care in the 1952-53 fiscal year; in 64 counties payments amounted to less than $0.10 per capita; in 25 counties they ranged from $0.10 to $0.49 per capita; in 10 counties they ranged from $0.50 to $1.00 per capita, and in three counties—Bourbon, Scott and Jefferson—they exceeded $1.00 per capita.

Thirty-seven counties reported no payments during 1952-53 to hospitals. Of the counties making payment for indigent hospital services, 21 counties spent less than $0.02 per capita for this purpose and 27 counties spent from $0.02 to $0.09.

No one familiar with the needs for hospital care for the sick who are unable to pay needs to be told that these 85 counties which are spending less than $0.10 per capita for indigent hospital care are failing to meet the demand for such aid. Many of these counties are apparently unable to make the necessary expenditures. Whatever may be the individual circumstance, however, it is clear that more than two-thirds of Kentucky's county courts are pushing the burden for the care of hospitalized indigent patients on to the shoulders of others, usually the hospitals' paying patients.

Inadequacies of publicly supported physicians' services to the indigent are similar. Thirty counties reported no payments to physicians for care of the needy. An additional 50 counties spent less than $0.02 per capita and 27 more spent from $0.02 to $0.09 per capita for such purposes. Comparable patterns prevail in the matter of drugs and may be assumed to prevail in dental and other professional services required by the sick poor.

Recommendations

It has been recommended, therefore, that legislation be passed at the 1956 session of the Kentucky General Assembly appropriating state funds and setting up necessary administrative procedures for an indigent medical care program.

Because under the most economical conduct of such a program, expenditures will be substantial, it is recommended that such medical care privileges be restricted initially to Public Assistance and General Assistance clients requiring care for acute illness and accidental injuries only.

In the state as a whole, approximately 4.5% of the population is on Public Assistance. These would be eligible under such a program. Experience in neighboring states which have similar programs in operation indicates that an approximately equal percentage would be eligible from General Assistance rolls.

It is estimated that the cost of such a program would now require payments to hospitals of from $1,250,000.00 to $1,500,-000.00 annually. This is based on the extrapolation of gratuitous services reported as now being provided by Kentucky general hospitals.

It is our opinion that payments to hospitals should be made on a fixed per diem basis rather than actual cost because it would simplify the program's administration, and that participating counties should be required to contribute funds in accordance with their financial ability.

It is recommended that the administration of the program should be by the Kentucky State Department of Health with the assistance of an advisory council. It is the considered opinion of the Association that local authority in the administration of such a plan is extremely desirable and every effort should be made to incorporate provisions for such local controls. This view is predicated on the assumption that a local screening committee to determine eligibility in specific cases would be best.

EDITORIALS

DID YOU ATTEND?

On April 20th and 21st, 1955, at the Brown Hotel in Louisville, the Kentucky Academy of General Practice held its fourth annual scientific assembly under the direction of Garnet J. Sweeney, M.D., of Liberty, President. It would be difficult for any organization to offer its members a more inviting and instructive program. Local talent from the faculty of the University of Louisville presented the best that could be offered in their respective fields. There were only four of these men on the program, however, and six speakers were invited from outside the state. These men are recognized nationwide as authorities in their specialties and their presentations were superb.

It is to the credit of the American Academy of General Practice that their members are required to attend post-graduate courses of this type, as well as other seminars and scientific discussions presented locally. For such attendance a specified credit is allowed and the member, to maintain good standing in the academy, must present a minimal number of credit points each year. This policy is in accord with that followed by some of the national specialists organizations for many years.

A physician must make some intellectual advancement if he is to keep abreast with medical progress and to render his patients the services they have a right to expect. Contact with men of wide experience and the exchange of ideas in informal conference are of the greatest help to this end. One might keep well informed from a faithful perusal of the now extensive medical literature, providing he had the time, disposition and energy to do so after long days of work. But then the inspiration and fellowship derived from attendance at medical assembly would still be lacking. These are, within themselves, fundamental factors in our advancement.

Nor should the physician feel that he can learn only from "renowned authorities" who may come from afar. The fellow practitioners with whom we work elbow to elbow day after day may have learned from experience or contacts many valuable techniques which would stand us in good stead. The exchange of ideas, therefore, which takes place at hospital staff, county society, or district medical meetings is often of quite as much practical value as is attendance upon conventions, seminars or round tables of national scope.

Irvin Abel, M.D., was always most regular and punctual at attendance upon monthly county society and hospital staff meetings. He would come in from presiding at the sessions of a national medical society. He held the presidency of several—and on Monday evening would be on the front row at the county society or St. Joseph staff meeting. He explained that he seldom, if ever, listened to a scientific presentation from which he did not learn something. If the discussion pertained to subjects outside his own field of surgery, so much the better—he found little time to read in these areas and the opinions of his fellow practitioners helped him "keep up." Many of us could profit in following the example of this distinguished surgeon.

SAM A. OVERSTREET, M. D.

Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

All scientific material appearing in the Journal is reviewed by the Board of Consultants on Scientific Articles. If illustrations are submitted with a paper, the Journal will assume the cost for the first three one-column width half tones. The cost of additional illustrations will be borne by the essayist.

Arrangements for reprints of an article should be made directly with the publisher of the Journal, Mr. J. G. Denhardt, Times-Journal Publishing Company, Bowling Green, Kentucky.

Please mail your scientific articles to the Journal of the Kentucky State Medical Association, 620 South Third Street, Louisville 2, Kentucky.

ORGANIZATION SECTION

Nationally Recognized Physicians to Address 1955 Assembly

A scientific program, widely diversified in its appeal, will be presented by men of nationally recognized talent at the 1955 Annual Session at the Columbia Auditorium, Louisville, September 27, 28 and 29.

Closed circuit color television, nine specialty group sessions, top flight speakers, the best in technical and scientific exhibits, will make the 1955 Annual Meeting of K.S.M.A. most worth while and profitable, Clyde C. Sparks, M.D., Ashland, president, said in making the announcement.

Among the guest speakers to appear on the program will be Merrill J. Reeh, M.D., Portland, Oregon, assistant clinical professor in opthalmology and consultant in opthalmic pathology at the Oregon Medical School, who will speak before the General Assembly Tuesday morning, September 27, on "Correlation of Pathology and Therapy in Glaucoma." Dr. Reeh is a graduate of the University of Nebraska and was certified by the American Board of Opthalmology in 1943. He is a Fellow of the American College of Surgeons, and is president of the Oregon Academy of Opthalmology and Otolaryngology.

Dr. Reeh

William B. Terhune, M.D., New Canaan, Connecticut, associate clinical professor of psychiatry at the Yale School of Medicine and consultant in psychiatry at the New York Psychiatric Association, will also address the scientific session on Tuesday morning. His subject will be "A Method of Treatment of Alcoholism and the Results." Dr. Terhune is a graduate of Tulane University Medical School. He served as president of the American Psychopathological Association in 1950, and is the author of numerous articles published in medical magazines and of several books on the subject of his specialty.

Dr. Terhune

On Wednesday morning, September 28, Albert Segaloff, M.D., West Haven, Connecticut, director of endocrine research at the Alton Ochsner Medical Foundation, will speak before the General Assembly on "Adrenal Cortical Hormones as Therapeutic Agents." Dr. Segaloff received his Doctor of Medicine degree from the Wayne University College of Medicine in 1943. Among other medical societies he is a member of the Endocrine Society, having received the Ciba Award in 1951, and the American Society for Clinical Research, the American Society for Cancer Research and the Laurentian Hormone Conference.

Dr. Segaloff

Harold J. Kullman, M.D., Dearborn, Michigan, professor of clinical medicine at Wayne University, will speak Thursday morning, September 29, before the assembly on "Gastric Ulcer—Criteria for Determining Method of Treatment." A graduate of Wayne University in 1927, Dr. Kullman is consultant physician at the Wayne County General Hospital at Eloise, Michigan, and chief of gastroenterology at the Veterans Administration Hospital in Dearborn. He served as a captain in the U.S.N.R. from 1942 to 1946.

Dr. Kullman

A pamphlet on medical education entitled "What's Up With Our Medical Schools" has been published by the A.M.A.'s Public Relations Department. The 12-page, two-color illustrated booklet was prepared in an endeavor to dispel the myth that medical schools fail to keep enrollments and graduates at a level commensurate with the growth of population. It may be obtained at the K.S.M.A. office in Louisville for distribution by county societies and other interested groups in Kentucky.

Dwight Murray, M.D., Named AMA Pres.-Elect at Atlantic City

Dwight Murray, M.D., Napa, California, chairman of the Board of Trustees of the AMA, was chosen unanimously as president-elect of the American Medical Association at its annual meeting in Atlantic City, on June 9.

Dr. Murray

Clark Bailey, M.D., Harlan, vice-president of the AMA and past president of KSMA, was succeeded by Millard Hill, M. D., Raleigh, North Carolina, E. V. Askey, M.D., of Los Angeles, California, vice-speaker of the House of Delegates, was elected speaker of the House, as James R. Reuling, M.D., Bayside, New York, speaker, was elected to the Board of Trustees to fill out the office vacated by Dr. Murray. Louis Orr, M.D., Orlando, Florida was made vice-speaker to succeed Dr. Askey.

Mrs. Clark Bailey, Harlan, who served as a vice-president of the AMA's Woman's Auxiliary during the 1954-55 year, was re-elected to this office.

Awards Committee Sets Deadline for Nominations at Aug. 1

Nominations for the two K.S.M.A. Awards to be presented at the Annual Meeting in September must be submitted by a deadline set at August 1, according to R. C. Strode, M. D., Lexington, chairman of the committee to select the recipients for the Distinguished Service Award and the Outstanding General Practitioner Award.

Emphasizing the need for having nominations for these honors submitted before the deadline, Dr. Strode said, "We understand that a number of counties have men that they would like to see receive one of these honors. All who contemplate submitting a nomination should send in full particulars on their candidate at an early date in order to insure proper consideration."

Nominations for the two awards may be made by county medical societies or individual members and should be mailed to the Headquarters Office, 620 South Third Street, Louisville. Other members of the Award Committee are H. B. Stone, M.D., Hopkinsville; L. T. Minish, M.D., Louisville; P. A. Bryan, M.D., Ashland; J. B. Kurre, M.D., Owensboro.

Ten Reunions of Medical Grads to Meet During Annual Session

Ten class reunions of University of Louisville School of Medicine alumni will be held in Louisville during the Annual Meeting of the Kentucky State Medical Association in September, according to Leslie Shively, director of alumni relations at the University.

There will be a reunion of the classes of 1905, '10, '15, '20, '25, '30, '35, '40, '45, and '50, said Mr. Shively. It is planned that this will be a yearly event and that in 1956 during the Annual Meeting there will be a reunion of ten classes beginning with 1906.

In the August issue of the Journal of K.S.M.A., Mr. Shively will announce the chairman of each of the ten classes. This issue of the Journal will carry full particulars of this innovation of the Annual Meeting.

Dr. Hess Addresses Nation in AMA Inaugural Ceremony, June 7

The inaugural address of Elmer Hess, M.D., Erie, Pennsylvania, who was installed as the 109th president of the American Medical Association, June 7, during the annual meeting in Atlantic City, was broadcast over 345 stations of the American Broadcasting Company network.

An audience of 5000, including AMA delegates and members, Atlantic City church representatives and the general public, attended the ceremony. The special coast-to-coast radio program, called "Medicine's Proclamation of Faith," was brought to Kentutcky physicians by stations in Bowling Green, Lexington, Louisville and Owensboro.

Sharing the speaking honors with Dr. Hess on the program, which stressed the importance of faith in medical practice, was Norman Vincent Peale, D.D., pastor of the Marble Collegiate Church in New York City. Spiritual music by the Temple University Concert Choir was a part of the program.

"The physician must take more into the sick room than his scientific skill," said Dr. Hess.—"Unless we are willing to give of ourselves and our faith, our science will avail us little."

Dr. Hess, a former president of the American Urologic Association and head of the urologic departments of St. Vincent's and Hamot hospitals in Erie, is to be the guest speaker at the President's Luncheon during the K.S.M.A. Annual Meeting, September 27-29, in Louis-

ville. The President's Luncheon will be held Wednesday, September 28, in the Roof Garden at the Brown Hotel.

Jefferson County Employs Fort Wayne Executive Secretary

Harry A. Lehman, for the past three years the executive secretary of the Medical Society of Allen County, Fort Wayne, Indiana, will become the executive secretary of the Jefferson County Medical Society on or about August 1, Richard R. Slucher, M.D., Buechel, chairman of the Jefferson County Executive Committee, said.

Mr. Lehman

Mr. Lehman will replace Jean Clos, Louisville, who has served as the Jefferson County Medical Society executive secretary for two years prior to his resignation on May 1. Dr. Slucher said Mr. Lehman is married and has one son.

C. H. Warfield, M.D., secretary of the Allen County group, writing in the June issue of the "Bulletin of the Fort Wayne Medical Society," warmly praised Mr. Lehman's work. He commended his efforts with the "Bulletin," organization work, civil defense, public relations, and public health. "It is not easy for a lay person to accomplish what Mr. Lehman has very well in these short three years," he said.

Mr. Lehman attended Bowling Green State University and took a business course at Purdue University. He had been employed by the Home Telephone and Telegraph Company at Fort Wayne for four years prior to going with the Allen County group. During World War II, he served with the Marine Corps.

Ky. and Tenn. GP's to Present Kenlake Seminar, July 14

The second annual Kenlake Seminar, presented by the Kentucky Academy of General Practice and the Tennessee Academy of General Practice, will be held at Kentucky Lake State Park, July 14, beginning at 2:00 p.m., according to an announcement by Charles Baron, M.D., Covington, chairman of the Committee on Education of the Kentucky Academy.

Following a scientific program, the dinner address will be given by John S. DeTar, M. D., Milan, Michigan, president-elect of the American Academy of General Practice.

There will be no registration fee, according to Dr. Baron. Those desiring to attend, he said, should contact Leslie Blakey, M.D., Cadiz, Kentucky, and send a deposit of one days hotel rate if intending to stay overnight.

AMA Session at Atlantic City Draws 79 from State

Topping the many KSMA members to attend the annual meeting of the American Medical Association at Atlantic City, June 6-10, were Bruce Underwood, M.D., Louisville, and Clark Bailey, M.D., Harlan, KSMA delegates, along with the KSMA president-elect, J. Gant Gaither, M.D., Hopkinsville.

Mrs. Karl Winter, Louisville, president of the Woman's Auxiliary to KSMA, and Dr. Winter, were also in attendance. Mrs. Winter participated in the national auxiliary program.

Among other Kentuckians interested in special professional organizations meeting with the AMA, was Carlisle Morse, M.D., Louisville, chairman of the KSMA diabetes committee, who had committee responsibilities with the American Diabetic Association.

Frank Hower, D.D.S., Louisville, attended the national session as a guest, representing the Council on Hospital Dental Services of the American Dental Association.

Attending the AMA session for the first time was Robert C. Clark, Louisville, medical writer for the Courier Journal.

Other Kentuckians who registered for the meeting, according to the Daily Bulletin, were as follows:

On June 6, Bert C. Bach, M.D., Whitesburg; John T. Bate, M.D., Louisville; Joseph Bell, M.D., Louisville; Eugene Blake, M.D., Paducah; Armand E. Cohen, M.D., Louisville; Herbert L. Collins, M.D., London; David M. Cox, M.D., Louisville; Armond Gordon, M.D., Louisville; Harold Gordon, M.D., Louisville; Mack L. Gottlieb, M.D., Louisville; Allen Grimes, M.D., Lexington;

M. M. Hall, M.D., Campbellsville; Horace Harrison, M.D., Owensboro; George F. Hermann, M.D., Ft. Thomas; David L. Hill, M. D., Louisville; Arthur L. Juers, M.D., Louisville; Irving Kanner, M.D., Lexington; John L. Keyes, M.D., Lexington; Joe E. Lane, M.D., Lexington; Champ Ligon, M. D., Lexington;

Arthur C. McCarty, M.D., Louisville; Oscar O. Miller, M.D., Louisville; Franklin B. Moosnick, M.D., Lexington; Maurice Nataro, M.D., Louisville; David H. Neustadt, M.D., Louisville;

Earl P. Oliver, M.D., Scottsville; Walter O'Nan, M.D., Henderson; Carl Pigman, M.D., Whitesburg; Owen Pigman, M.D., Whitesburg;

Gradie R. Rowntree, M.D., Louisville; Marjorie Rowntree, M.D., Louisville; Otto Salsbery, M.D., Covington; Dixie E. Snider, M.D., Springfield; L. H. South, M.D., Louisville; L. O. Toomey, M.D., Bowling Green; Jack G. Webb, M.D., Lexington; William Wilcox, M.D., Fort Knox; Frank L. Yarbrough, M.D., Owensboro.

On June 7, the following registered: John D. Allen, M.D., Louisville; Robert G. Boles, M.D., Louisville; Michael R. Cronen, M.D., Louisville; L. L. Cull, M.D., Frankfort; Martha Harmon, M.D., Louisville; Richard T. Hudson, M.D., Louisville; William Massie, M.D., Lexington; Buell B. Mills, M.D., Pineville; R. C. Moss, M.D., Bowling Green;

H. Oppenheim, M.D., Louisville; William H. Pennington, M.D., Lexington; Joseph C. Ray, M.D., Louisville; Ben A. Reid, M.D., Louisville; Earle W. Roles, M.D., Louisville; Arthur M. Schoen, M.D., Louisville; Keith P. Smith, M.D., Corbin; Milo Schosser, M.D., Benham; William N. Smith, M.D., Crummies; E. Alden Terry, M.D,. Louisville.

The following registered on June 8: Everett H. Baker, M.D., Louisville; Lawrence A. Davis, M.D., Louisville; W. M. Ewing, M.D., Louisville; Raymond Heitz, M.D., Louisville; Roscoe Kerr, M.D., Louisville; M. M. Lawrence, M.D., Jamestown; George Schuhmann, M.D., Louisville; Winfield Stryker, M.D., Paducah; Irvin Sonne, M.D., Louisville.

On June 9, the following were registered: S. P. Auerbach, M.D., Louisville; Robert C. Butz, M.D., Huntington; R. B. Simons, M.D., Lexington; Herbert Wald, M.D., Louisville.

Rural Ky. Medical Fund Loans Given to 93 Students

Ninety-three students have received loans totaling $176,896 for their medical education through the Rural Kentucky Medical School Fund, the Fund's trustees were told at a meeting on May 19 in Louisville, by C. C. Howard, M.D., Glasgow, chairman of the trustees.

The report of Raymond F. Dixon, the executive secretary to the trustees, stated that: 23 of those who received loans are now in practice in rural communities; seven other beneficiaries did not finish their medical education; one did not enter rural practice; eight have practiced in rural areas but are now elsewhere; 10 are taking internship or residency training; one did not complete his internship; five are in military service with plans to practice in rural communities after their discharge. The balance are still in medical school.

According to the report, funds allotted for the coming school year total $26,400. The program, sponsored by the Kentucky State Medical Association, is financed by donations from interested physicians and other individuals, and organizations throughout the state.

Dr. Hancock Explains New S S Law to Protect Disabled Workers

Physicians, hospitals and clinics will have an important part in assisting their patients to get the benefit of a new provision of the social security law which protects a worker's social security record while he is disabled, according to J. Duffy Hancock, M.D., Louisville, chairman of the Social Security Administration's Medical Advisory Committee.

A person who is unable to work because of mental or physical disability, or who is blind, can have his social security earnings record "frozen" under the new law.

The effect of this action is similar to that of the waiver premium in life insurance policies. It provides that the benefit payable to the person when he qualifies, or to his family in case of his death, will not be reduced because of the period in which he had no earnings.

Persons already receiving monthly old-age insurance benefits, if they were disabled for a considerable period of time before they reached 65, may have their benefits increased under the new law beginning with payments for July, 1955.

The new law protects the social security records of people who have been in work covered by social security for five out of the ten years before they were disabled, and for one and one-half out of the three years before they were disabled; who are unable to engage in substantial gainful activity because of a medically determinable impairment which is expected to be of long-continued or indefinite duration; and who apply to have their records frozen while they are disabled and after they have been disabled six months or more.

A determination that a person is disabled must be based upon medical evidence. The patient himself is expected to secure the initial medical evidence; therefore he will frequently request a summary of the history, clinical findings, and treatment of his case from his physician or medical facility. In other cases the request, along with a release signed by the patient, may come from the State agency responsible for the determination of disability, or

from the Social Security Administration.

The medical reports will advance the patient's welfare if they are completed promptly and accurately, with sufficient detail to support the diagnosis.

The Social Security Administration hopes that many applicants can be returned to productive work through Vocational Rehabilitation services. Work in connection with rehabilitation services or in a "sheltered workshop" will not prevent a finding of current disability.

Further information regarding the new freeze provision is available from your nearest social security office.

Dr. Pennington Elected to Head Kentucky Surgical Society

The Kentucky Surgical Society, meeting at the Homestead Hotel, Hot Springs, Virginia, May 20-21, elected William H. Pennington, M.D., Lexington, as president for the coming year.

R. W. Robertson, M.D., Paducah, was chosen vice-president. The term of Francis Massie, M.D., Lexington, secretary of the society, has one more year to run.

The Friday afternoon, May 20, scientific program was given by Richard R. Crutcher, M.D., Lexington, Rudolf J. Noer, M.D., Louisville, Edward H. Ray, M.D., Lexington, N. Lewis Bosworth, M.D., Lexington, and Henry S. Collier, M.D., Louisville.

The department of surgery of the University of Virginia School of Medicine gave the May 21 scientific program. Participants were: E. D. Vere Nicoll, M.D., C. B. Morton, II, M.D., W. Gayle Crutchfield, M.D., W. R. Sandusky, M.D., W. H. Muller, M.D., and Hugh Warren, M.D.

The following were elected to membership in the society: Marion Crowder, M.D., Owensboro; Russell Davis, M.D., Pikeville; Merle Fowler, Jr., M.D., and W. Burton Haley, M. D., Paducah; Richard Grise, M.D., Bowling Green; Hubert Jones, M.D., Berea; W. Vernon Lee, M.D., and Albert J. Vesper, M.D., Covington; C. C. Lowry, M.D., Murray; Richard H. Weddle, M.D., Somerset.

Carl Friesen, M.D., James B. Halloway, M.D., Randolph Gilliam, M.D., Kearns Thompson, M.D., and Thomas Yocum, M.D., all of Lexington; Morgan Colbert, M.D., Thomas Giannini, M.D., Dave Kinnaird, M.D., Blaine Lewis, M.D., Thomas Marshall, M.D., James Riley, M.D., and Daniel Costigan, M.D., all of Louisville.

Mental Health Survey in State May be Completed August 1

In January, 1955, Governor Wetherby requested that a survey be made of the State's total resources and needs in the field of mental health. To assist in this survey, Daniel Blain, M.D., Washington, medical director of the American Psychiatrist Association, was retained as a consultant. He and John Rompf, M.D., Lexington, were elected by the Committee to serve as co-chairmen during the survey, which is expected to be finished around August 1.

In Kentucky, as in most states, the number of patients admitted to mental hospitals continues to rise, and the cost of caring for these patients has also increased in recent years. At

The above picture is of the Speaker's table at the annual banquet of the Kentucky Surgical Society, which met at Hot Springs, Virginia, May 20 and 21.

the same time, the prevention and treatment of mental illness have progressed rapidly so that the states generally can hope to find new and fundamental solutions to their problems of mental health and health. In the past, however, surveys in the mental health field have for the most part been limited to mental health generally. For these reasons, it was important to establish a wide base for the study of Kentucky's mental needs and resources.

The Committee had its first meeting in Frankfort with Governor Wetherby on March 10, 1955. A number of sub-committees were formed to study the many facets of mental health. Among these were special sub-committees on personnel training, research, mental health in schools and colleges, private practice of psychiatry, mental health in courts and prisons, public health, religion, preventive psychiatry, existing public and private facilities, cost and finance, and special problems, such as mental deficiency, alcoholism, aging, and children.

The Committee arranged to hold public hearings in Louisville on April 12 and 13, 1955. At the Governor's invitation, 38 persons presented to the Committee their views on the mental health needs of their communities. A diverse group was represented, including parent teachers organizations, mental health societies, attorneys, judges, private and public welfare agencies, etc.

Members of the Survey Committee are: S. S. Ackerly, M.D.; Mr. Edward T. Breathitt, Jr.; Mrs. M. M. Harrison; Arthur Kasey, M.D.; Senator R. P. Maloney; John Rompf, M.D.; Mrs. John S. Serpell; R. C. Smith, M.D.; Mr. Jack B. Stith;

Bruce Underwood, M.D.; Mr. Frank A. Yost; Dr. Howard Beers; The Rt. Rev. C. Gresham Marmion; Mr. James R. Thurman; John A. Lewis, M.D.; Dr. W. F. O'Donnell; Dr. James Calvan; Mr. Art Theobald; Mrs. Marjorie Tyler.

Frank Gaines, M. D.
State Commissioner of Mental Health

AMA's Council on Medical Service Surveys County Societies

The AMA's Council on Medical Service is distributing questionnaires to all county and district medical societies in the United States to find out what they are doing and to help them develop new public service programs, according to the June AMA release.

The survey covers all major areas of interest to medical societies, including meetings, programs and activities, insurance programs, dues, office facilities, and personnel. The information gained in the survey will aid societies seeking assistance in expanding their activities.

It is hoped that all questionnaires will be returned as soon as possible. This year's survey is being conducted in cooperation with the AMA's Department of Public Relations.

Dr. Sparks Addresses 9th District at Cynthiana, May 12

The annual dinner meeting of the Ninth Councilor District was held at the Harrison Hotel in Cynthiana on Thursday, May 12, according to J. M. Stevenson, M.D., councilor for the district.

"Your Stake in Organized Medicine" was the title of an address by Clyde C. Sparks, M. D., Ashland, president of K.S.M.A. In addition to the president's address, two scientific papers were presented. William Blodgett, M.D., Louisville, and Edgar S. Lotspeich, M.D., a Cincinnati neurosurgeon, presented the scientific program.

The Harrison County Medical Society was host to the district. K. W. Brumback, M.D., is president of the Harrison County Society, and C. L. Thornberry, M.D., is secretary.

Pres. Sparks Featured at May 26 Meeting of Sixth District

"State Medical Associations—Their Functions and Futures" was discussed by K.S.M.A. President Clyde C. Sparks, M.D., Ashland, at a joint meeting of the Sixth Councilor District with the Warren County Medical Society at Bowling Green, May 26.

According to L. O. Toomey, M.D., Bowling Green, Councilor of the district, who made the announcement, in addition to Dr. Spark's talk scientific papers were presented by W. H. Cloyd, M.D., Glasgow, and Keith Coverdale, M.D., Bowling Green.

Dr. Toomey said every county of his district but one was represented and the attendance was gratifying. Frank H. Moore, M.D., Bowling Green, is president of the district and Harold Keen, M.D., also of Bowling Green, is secretary.

Because the 1955 Annual Session of the American Medical Association ended on the dead-line for material of this issue of the Journal, a digest of the more significant acts of the 1955 session of the House of Delegates will appear in the August issue.

Seventh District Hears Dr. Sparks at Frankfort, June 2

Max Klein, M.D., Shelbyville, was chosen president of the Seventh Councilor District, Edward Gill Houchins, M.D., La Grange, vice-president, and Rueben N. Lawson, M.D., secretary, at the annual meeting of the Seventh Councilor District at Frankfort at the Country Club, June 2.

Branham B. Baughman, M.D., Frankfort, councilor for the district, said that K.S.M.A. President Clyde C. Sparks, M.D., Ashland, gave the feature address of the evening, which was heard by 62 members and their wives of the district.

The scientific program was presented by Dr. Klein, Murvel C. Blair, M. D., Frankfort, and Rudolf J. Noer, M.D., Louisville.

Pres. Sparks is Speaker for First District at Paducah, May 25

The annual joint meeting of the First Councilor District and the McCracken County Medical Society was held at the Ritz Hotel in Paducah, Wednesday, May 25, according to J. Vernon Pace, M.D., councilor for the district.

K.S.M.A. President Clyde C. Sparks, M. D., Ashland, discussed problems that organized medicine is facing. The title of his talk was "From Here to Where—How." A lengthy discussion in which there was wide participation followed.

Dr. Pace expressed himself as being well pleased with the meeting. Merle W. Fowler, Jr., M.D., Paducah, president of the McCracken County Medical Society, presided at the meeting. Following the session, the McCracken County Society held a business meeting.

Fifty Hear Dr. Sparks at Second District in Henderson, May 27

More than 50 members and their wives of the Second Councilor District assembled at the Henderson Country Club, Henderson, for its annual meeting on Friday, May 27, according to Walter L. O'Nan, councilor for the district.

K.S.M.A. President Clyde C. Sparks, M. D., Ashland, discussed "Changing Trends in Medical Practice." Rex O. McMorris, M.D., medical director of the Rehabilitation Center at the Louisville General Hospital also addressed the members. The title of his paper was "Medicine and Rehabilitation."

Andrew B. Colley, M.D., Owensboro, was chosen president of the district and William L. Woolfolk, M.D., also of Owensboro, was elected secretary. Darrel L. Vaughn, M.D., Henderson, is the retiring president, and George A. Buckmaster, M D., Henderson, is the out-going secretary, Dr. O'Nan said.

Kentucky Men Actively Participate in Atlantic City Convention

Several Kentucky physicians participated in the AMA's 104th Annual Meeting at Atlantic City, New Jersey, June 6-10, according to special releases from the convention city.

Lawrence Davis, M.D., and Arthur Juers, M.D., both of Louisville, presented scientific papers. Dr. Davis reported on the use of Urokon and Hypaque to create shadows in x-ray pictures of the stomach and intestines. Dr. Juers described treatment and surgery for ear infections.

A scientific exhibit, describing the causes and cures of "portal hypertension" arranged by two Lexington physicians, Franklin B. Moosnick and Jack G. Webb, attracted favorable attention. W. McDaniel Ewing, M.D., Louisville, gave a demonstration of how to apply plaster casts.

Dr. Allen Honored in Ceremony at Beaver Dam, May 22

Sunday, May 22, was "Oscar Allen Day" for the citizens of Beaver Dam and its surrounding countryside, in honor of Oscar Allen, M.D., for his fifty years of medical service to the community.

Arthur T. Hurst, M.D., Louisville, K.S.M.A. vice-president, represented K.S.M.A. President Clyde C. Sparks, M.D., Ashland, along with Walter L. O'Nan, M.D., Henderson, councilor for the second district in which Dr. Allen lives, and K.S.M.A. President-elect J. Gant Gaither, M.D., Hopkinsville.

More than 2000 "babies" were present, the first "baby" delivered by Dr. Allen among them. Musical selections were played during the program at the McHenry School Building, by an orchestra made up entirely of grandchildren of the physician. Following the ceremony, which followed the "This is Your Life" format, a reception was held at the school.

Southern Trudeau Society Meets in Louisville, Sept. 21-23

More than 200 physicians from 15 southern states are expected to attend the three-day meeting of the Southern Trudeau Society, at the Brown Hotel, Louisville, September 21-23, according to Adam Miller, M.D., Lexington, president of the Kentucky Trudeau Society.

Tuberculosis and the general practitioner is the subject for discussion September 22. Papers on case finding in the office, primary tuberculosis, tuberculosis and pregnancy and when home care is permissible will be presented by leaders in the field of pulmonary disease.

Other subjects for discussion will be problems in chemotherapy and non-tuberculous disease. A Pembine type consecutive case conference will be presented Thursday evening by a group of Kentucky physicians. John Harter, M.D., Louisville, is chairman of the case conference.

Dr. Cameron Given State Post

Edwin Cameron, M.D., Louisville, was appointed to the position of director of the Division of Preventive Medicine of the State Department of Health by Bruce Underwood, M.D., Louisville, Commissioner of the Department. Dr. Cameron began his duties on May 11, 1955.

From 1952 to 1954 he was with the World Health Organization in New Delhi, India, serving in the capacity of advisor in education and training to the regional director for Southeast Asia, a district including seven nations. Dr. Cameron, a native of Nova Scotia, succeeds U. Pentti Kokko, M.D., Louisville, who became director of the Division of Local Health Services in January of this year.

Polio Advisory Committee Named

A five-member advisory committee on distribution of future supplies of polio vaccine in Kentucky was appointed on May 25 by Bruce Underwood, M.D., Louisville, State Commissioner of Health and Secretary of K.S.M.A.

W. W. Nicholson, M.D., Louisville, was named chairman of the committee. The other members are: C. Howe Eller, M.D., Louisville; Wyatt Norvell, M.D., New Castle, E. M. Josey, M.D., Frankfort, and Mrs. Herbert Zimmerman, president of the Louisville Council of Parents and Teachers. Four other Louisville physicians were named to meet with the advisory group, including Alex J. Steigman, professor of child health and pediatrics at the University of Louisville School of Medicine, as scientific consultant; U. Pentti Kokko, director of local health services; Edwin Cameron, director of preventive medical services; and L. R. Mezera, director of maternal and child health.

Dr. Hess to Head New AMA Comm.

An A.M.A. committee to meet with representatives of labor and management in a joint effort to help solve some of the medical problems of working people will be headed by Elmer Hess, M.D., Erie, Pennsylvania, recently installed president of the A.M.A., it was announced by A.M.A. Board Chairman Dwight H. Murray, M.D., Napa, California.

Dr. Hess said, "There are many widely divergent points of view on medical care, but there are many areas, particularly in the field of preventive medicine, where the time is ripe for realistic discussion of the issues. This committee offers great possibilities for determining whether attitudes on many of the vexing health problems are irreconcilable or offer a genuine opportunity for mutually helpful activity."

Physicians, Lawyers Hold Seminar

Kentucky and Southern Indiana physicians and lawyers considered some of their common problems at a seminar held May 24 at the Kentucky Hotel as a part of Law Day observance in Louisville.

The seminar was jointly sponsored by the Louisville Bar Association and the new Louisville Law-Science Foundation to promote greater cooperation between the medical and legal professions. Members of the medical profession on the program were J. Duffey Hancock, past president of K.S.M.A., Arnold Griswold, Morris Weiss, A. J. Miller, Kenton Leatherman, all of Louisville, and a panel of physicians including Thomas Marshall, Louis Foltz, K. S. Fischer, and Gerald Peterson.

A new pamphlet on the controversial subject of cigarettes and lung cancer has been authored by Pat McGrady, science editor of the American Cancer Society, according to an announcement in the AMA Secretary's Letter. In reviewing 12 surveys made on the subject, the author points out that "in every study the percentage of cigarette smokers was greater among lung cancer patients than among healthy people of the same age, sex, and socio-economic status." Copies may be obtained from the Public Affairs Committee, 22 East 38th Street, New York.

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Notes on the Diagnosis and Management of "Dizziness"

II. False Dizziness

1. Romberg's Sign

The patient stands with his feet together and his eyes closed. Inability to maintain equilibrium may indicate locomotor ataxia or sclerosis of the posterior columns of the spinal cord (tabes dorsalis).

2. Inability to Walk a Straight Line

3. Inability to Stand on One Foot

A patient's inability to stand on one foot without lurching may be a helpful test in distinguishing between "dizziness" which is purely psychogenic and that which is of organic origin.

False dizziness is a sensation of sinking or lightheadedness which is often of psychogenic origin. It should be distinguished from true "dizziness" or vertigo[1] in which there is a definite whirling, moving sensation.

Unsteadiness, lightheadedness and similar manifestations of false dizziness[2] may be psychogenic or the result of arteriosclerosis, hypoglycemia, drug sensitivity and general metabolic disturbances such as anemia and malnutrition. Hypertension is often the cause of these symptoms.

Psychogenic dizziness probably originates at the highest brain centers. It may be described as a sense of uncertainty with occasional mild lurching but not to the point of falling. In these patients there is no nausea, no disturbance of vestibular pathways and otologic and neurologic examinations are negative. The sensation is unaffected by head movement. Symptoms usually disappear[3] with complete rest.

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KSMA Members Serve on Blindness Prevention Committee

A recently-organized group of professional and lay persons, the Kentucky Committee of the National Society for the Prevention of Blindness, is planning a program which will be statewide in scope, according to C. Dwight Townes, M. D., Louisville, chairman of the Professional Advisory Committee.

A pre-school vision testing program for the Louisville area is currently under way and children between the ages of three and six are being screened by trained Delta Gamma volunteers. Aside from detecting common refractive errors, children will be observed for signs of eye trouble, such as strabismus. Charles T. Moran, M. D., Louisville, is chairman of the Project Advisory Committee.

In addition to Dr. Townes and Dr. Moran, the committee is composed of the following Kentucky physicians: William C. Wells, Glasgow; W. N. Offutt and William O. Preston, Lexington; Mack Rayburn, Owensboro; George H. Widener, Paducah; and, from Louisville, R. A. Gettelfinger, Arthur H. Keeney, Harry A. Pfingst, Bruce Underwood and Gradie R. Rowntree, industrial chairman.

Increase in Research Funds Desired

The possibility of the Medical Research Commission asking the 1956 Session of the Kentucky Legislature to increase the appropriation for research funds for the University of Louisville School of Medicine from $300,000 to $500,000 was discussed at a meeting of the Commission in Louisville, May 19.

C. C. Howard, M.D., Glasgow, chairman of the Commission, who made the announcement, pointed out that the medical school is serving all of the State through its extensive research program. Plans were made at the meeting to give Governor Wetherby a detailed report on the research projects that the University is conducting.

Crab Orchard Honors Dr. Phillips

M. M. Phillips, M.D., Crab Orchard, was honored on July 2 at a ceremony arranged by the American Legion Post, for fifty years of service in the community as a family physician.

Dr. Phillips was born in Lida, Laurel County. He graduated from the Hospital College, now the University of Louisville School of Medicine, in 1905. He is a past president and present secretary of his county medical society.

The ceremony in his honor was highlighted by prizes for the oldest and youngest baby delivered by Dr. Phillips, and a talk by his brother, S. Albert Phillips, outlining Dr. Phillips' career.

Kentucky Men Elected to AAP

Two physicians were recently elected to membership in the American Academy of Pediatrics, according to an announcement by E. H. Christopherson, M.D., Evanston, Illinois, executive of the Academy.

Charles Miles McKinley, M.D., Lexington, and Winfield Stryker, M.D., Paducah, were elected on March 31. Dr. McKinley graduated from Columbia University College of Medicine in 1911, and Dr. Stryker is a graduate of Albany Medical College, class of 1947.

Dr. Verhoeff Honored by U. of L.

Frederick H. Verhoeff, M.D., Consulting Chief of Ophthalmology at the Massachusetts Eye and Ear Infirmary and Professor Emeritus of Ophthalmology at the Harvard School of Medicine, received an honorary Doctor of Science Degree at the University of Louisville commencement exercises June 5.

Dr. Vorhoeff, a native son of Louisville, lectured at the annual Post-Graduate Seminar at the University on June 6. He was entertained by the faculty of the section on ophthalmology at a dinner the evening of June 4.

AMA Aux. Sent Check to AMEF

The AMA Woman's Auxiliary presented a check for $80,000 to the American Medical Education Foundation, June 8, during a luncheon in honor of Mrs. George Turner, auxiliary president, and Mrs. Mason G. Lawson, president-elect, during the AMA's convention at Atlantic City. George F. Lull, M.D., Chicago, secretary and general manager of AMA and vice-president of the AMEF, accepted the gift, and presented awards of merit to 12 auxiliaries and two auxiliary members for their efforts on behalf of the Foundation.

A treasury grant of $25,000 has been presented by the Medical Society of New Jersey to the American Medical Education Foundation for support of the nation's medical schools. The contribution was made during the AMA's 104th Annual Meeting at Atlantic City June 6-10. Total contributions to the AMEF to date exceed $303,000.

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News Items

Fred J. Cecil, M.D., formerly of Bardstown, Kentucky, will locate in Symsonia during the first week in July, after finishing his internship at the Kentucky Baptist Hospital in Louisville. Dr. Cecil is a graduate of the University of Louisville School of Medicine. Getting a physician to locate in their community climaxed many months of activity by a committee of the citizens of Symsonia, who erected an office building and clinic, which Dr. Cecil will use rent-free for a year.

A. N. Ward, M.D., is entering the industrial practice of medicine with the Carbide and Carbon Chemical Company of Paducah. Dr. Ward formerly practiced in Oak Ridge, Tennessee. He is a graduate of the University of Tennessee College of Medicine, class of 1951.

Henry W. Cave, M.D., New York City, who was born in Paducah, received an honorary doctor of science degree on May 29 from the University of Kentucky. Dr. Cave will be remembered by those who attended the 1951 Centennial Meeting as a speaker at the Fourth Scientific Session.

John B. Floyd, Jr., M.D., Lexington, entered the service June 10, 1955. He is stationed at the 3380th Keesler AFB Hospital in Biloxi, Mississippi. Dr. Floyd graduated from the University of Louisville School of Medicine in 1941 and interned at St. Elizabeth Hospital in Covington. He served a residency in Charity Hospital, New Orleans, before beginning his practice in Lexington.

Richard M. Brandon, M.D., who will complete a year of general rotating internship at St. Elizabeth Hospital in Covington, will locate in Maysville in July, according to news sources. Dr. Brandon received his degree at the University of Louisville School of Medicine in 1954, having attended on a scholarship from the Mason County Farm Bureau. He was with the armed forces from 1940 until 1945.

Frank J. O'Brien, M.D., formerly of Louisville, is retiring as head of the Division of Child Welfare of the New York Board of Education. Dr. O'Brien was a member of the faculty of the University of Louisville School of Medicine for five years and was a director of the Kentucky State Board of Health. He went to New York in 1937.

Henry S. Gordiner, M.D., is leaving Paducah, where he has been practicing since 1951, to enter the United States Air Force. He is a graduate of the University of Buffalo School of Medicine, class of 1947, and interned at St. Mary's Hospital in Detroit.

O. T. Davis, M.D., who was located in Owensboro before entering the United States Air Force, is now beginning a practice in Hopkinsville after leaving the service. He will practice internal medicine with special attention to diseases of the heart. Dr. Davis is a graduate of Bowman Gray School of Medicine of the class of 1943.

Mr. Leo Brown, Chicago, Director of Public Relations of the A.M.A., has returned to his regular assignments after undergoing surgery for acute appendicitis at the Passavant Memorial Hospital on May 16.

Fred B. Weller, M.D., is now practicing in Pineville, having returned from service with the armed forces. He is a graduate of the 1946 class of the University of Louisville School of Medicine. His internship was spent at the Jefferson Davis Hospital in Houston, Texas.

Brigadier General Elbert DeCoursey, M. C., Washington, D. C., and native of Kentucky, received an honorary degree of doctor of science from the University of Kentucky at its commencement exercises on May 29. General DeCoursey was an outstanding speaker on the scientific program of the 1951 Centennial Session of K.S.M.A.

Presley Martin, M.D., has returned to private practice in Elizabethtown upon returning from a tour of duty with the U. S. Air Force. Dr. Martin is a graduate of the University of Louisville School of Medicine, class of 1951, and served his internship at St. Anthony's Hospital in Louisville.

A new booklet became available in June from AMA's Council on Medical Service, containing up-to-date information on multiple screening programs. It contains detailed descriptions of 33 multiple screening surveys carried on in 14 states and the District of Columbia, ranging from small operations in a single company to statewide programs. Definitions, basic principles and statements of both advantages and disadvantages of such programs are given.

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SOME ASPECTS OF CARBOHYDRATE METABOLISM

(Continued from page 597)

treat, if we confine our diagnosis to "hyperglycemia" until, in each case, all known mechanisms of its production have been explored.

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Announcement of a one hundred dollar scholarship loan to a professional nursing student residing in Fulton or Hickman Counties has been made by the Woman's Auxiliary to the Fulton-Hickman County Medical Association. Applicants will be judged on the basis of merit and financial need, according to Mrs. M. W. Haws, Nurse Recruitment Chairman of the Medical Auxiliary. This will be the fourth consecutive year that the auxiliary has made such an award.

During the summer, two staff members of the AMA's Bureau of Health Education, Fred V. Hein, Ph.D., and Donald A. Dukelow, M.D., will attend nine school health workshops sponsored by universities, state education and health departments, and voluntary health agencies. This is a part of the AMA's effort to emphasize the role of the educator, physician and family in providing sound health education for the nation's school children. The AMA men will not only offer their counseling services at the conferences, but will in some instances present papers on aspects of school health and health services.

County Society Reports

BOURBON

Fifty-six physicians from five counties were the guests of the Bourbon County Medical Society at the Stoner Creek Country Club on May 9 at Paris, Kentucky. J. Murray Kinsman, M.D., Louisville, dean of the University of Louisville School of Medicine, was the guest speaker.

The Bourbon Society is the host to the five county medical meeting three times each year. Physicians from Montgomery, Clark, Harrison, Fayette and the host county, Bourbon, attended.

CALLOWAY

The Calloway County Medical Society held its regular monthly meeting in the library of the Murray Hospital on April 5, C. H. Jones, M.D., president, presiding.

J. A. Outland, M.D., announced that the program for the Salk Polio Vaccine was ready for approval by the State and that approximately 600 had signed up for the preventive treatment in Murray and Calloway County.

Hugh Houston, M.D., read a letter from Theodore Adams, M.D., Lexington, chairman of the Committee on Emergency Service, requesting the Calloway County Society to organize for emergency medical services. A discussion followed, and it was decided to notify Dr. Adams that the Society as a whole would act as a committee on civil defense.

Dr. Jones asked the Committee on the Poor Farm to continue the investigations on the plans of the County Fiscal Court to turn the Farm into a Home for the Aged.

Dr. Houston announced plans for placing a bulletin board for use of the Society in the hospital. A physician's mailbox was also discussed.

There were 13 present at the meeting, which adjourned at 8:10 p.m.

Robert Hahs, M.D., Secretary

LETCHER

The Letcher County Medical-Dental Society held its bi-monthly meeting on Tuesday, April 26, 1955, in Whitesburg. Owen Pigman, M. D., president, presided.

Lad R. Mezera, M. D., Director, Division of

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Maternal, Child and School Health of the State Department of Health, the guest speaker, was introduced by R. Dow Collins, M. D., secretary.

Dr. Mezera pointed out that more complete cooperation was needed on the part of Kentucky physicians in such matters as incomplete reporting of births, lack of prenatal serology, number of immunizations being given and examinations of school children. He urged better prenatal care throughout the state.

In addition to the above the following members were present: Carl Pigman, M.D., B. C. Bach, M.D., D. V. Bentley, M.D., T. M. Perry, M.D., A. B. Carter, M.D., E. G. Skaggs, M.D., Lee Moore, D.M.D., and Fred L. Coffey, associate member. Visitors present included G. B. Edmiston, M.D., and Paul F. Risk, M.D., both of Jenkins.

R. Dow Collins, M.D., Secretary

McCRACKEN

James Wortham, M.D., of the department of internal medicine at the University of Arkansas, Little Rock, spoke on "Some Aspects of the Pathogenesis of Diabetic Arteriosclerosis with Consideration of Adrenalectomy in its Treatment." The reading of the paper was followed by a question and answer period.

A discussion of the possibility of having a psychiatrist open an office in Paducah on a part-time basis was held. It was moved and passed that R. W. Robinson, M.D., contact the State Board of Health to request the approval of a license to practice in Kentucky for an Illinois psychiatrist.

Vernon Pettitt, M.D., was unanimously voted in as a member of the society.

The following motions were made and approved: (1) a committee to be appointed to investigate the medical needs of Boy Scouts at Pack-In-Tuck; (2) to establish a city commission on Beautification; (3) approval of recommendations of the National Foundation on Infantile Paralysis for the administration of the polio vaccine, and (4) to request the secretary to write Kentucky Senators and Representatives asking them to use their influence in the passage of a voluntary pension plan for the self-employed.

The meeting was adjourned at 10:15 p. m.

Walter R. Johnson, M.D., Secretary

SCOTT

The Scott County Medical Society met on Thursday, April 14, 1955, at the John Graves Ford Memerial Hospital in Georgetown.

F. W. Wilt, M.D., gave a report on the statute governing the appointment of trustees of the County Hospital. He said that they are to be appointed by the Fiscal Court and the first appointees are to serve one year, two year and three year terms.

J. C. Cantrill, M.D., president, gave a report on the County Society Officers Conference in Lexington. He reported that Rankin C. Blount, M.D., Lexington, will read a paper at the May meeting.

It was decided that recommendation be made that the Fiscal Court employ a competent social service worker to investigate indigent cases asking financial aid from the county.

It was further agreed that physicians in the county should charge $12.00 for the three doses of the polio vaccine.

The following additional members were present: C. R. Lewis, M.D., A. F. Smith, M.D., E. C. Barlow, M.D., W. S. Allphin, M.D., H. G. Wells, M.D., and H. V. Johnson, M.D. Mrs. Teagarden, superintendent of the hospital, was a guest.

SCOTT

Rankin Blount, M.D., Lexington, presented a paper entitled "Congestive Heart Failure" before the May 5 meeting of the Scott County Medical Society in Georgetown.

A letter to Parke, Davis and Company from the Society, protesting against their early distribution of the Salk Polio Vaccine and their reply was read by the secretary, H. V. Johnson, M.D.

Eight members were present at the meeting, which was held at the John Graves Ford Memorial Hospital. Mrs. Teagarden, superintendent of the hospital, met with the society.

H. V. Johnson, M.D., Secretary

SHELBY-OLDHAM

Arthur Keeney, M.D., Louisville, was the guest speaker at the May meeting of the Shelby-Oldham County Medical Society at Stone Inn, Simpsonville.

Dr. Keeney spoke on "The Bloody Eye," using slides to illustrate his remarks.

There was a general discussion of the Salk vaccine and its administration.

Twenty-four were in attendance at the dinner meeting. The date of the next meeting was set for September 22.

C. C. Risk, M.D., Secretary

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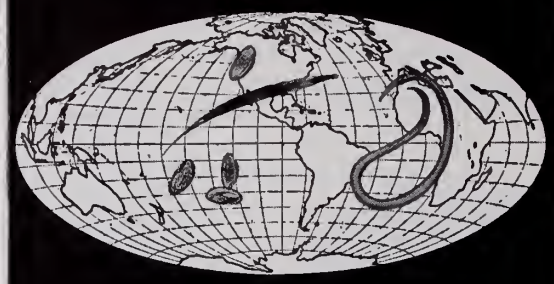

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In Memoriam

BOB C. OVERBEY, M. D.

Paducah

1877 - 1955

Dr. Overbey died January 14, 1955, of a heart attack. He was 78 years of age at the time of his death.

He graduated from the University of Louisville Medical Department in 1903, and immediately began his practice of medicine in Calloway County. Later, he practiced for a time in Marshall County and then at LaCenter, Kentucky, moving to Paducah in 1926.

B. RALPH WILSON, M. D.

Sharpsburg

1903 - 1955

Dr. Wilson, 52, died at the Mary Chiles Hospital in Mt. Sterling on May 11, 1955, following a long illness. He had been a practicing physician in Sharpsburg for 18 years.

Dr. Wilson attended the University of Kentucky and graduated from the University of Louisville School of Medicine in 1931. He was a native of Bath County, the son of Ben Wilson and the late Prudence Vanarsdell Wilson.

He was a member of the Christian Church and the Masonic Lodge.

L. V. WILLIAMS, M. D.

Nicholasville

1879 - 1955

Dr. Williams, a practicing physician in Nicholasville since 1914, died May 24, 1955, at a Lexington hospital at the age of 75.

A native of Fayette County, he attended Transylvania College and the Southwestern Medical College, Louisville, graduating from the latter in 1904.

M. J. HENRY, M. D.

Louisville

1890 - 1955

Dr. Henry, age 65, died on June 3 in Louisville while attending Mass at St. Agnes Church.

Dr. Henry was a member of the Board of Governors of the American College of Surgeons. He was the first president of the Kentucky Chapter of the College, and a former president

of the Jefferson County Medical Society. At one time he was chairman of the City-County Health Board in Jefferson County.

A native of Louisville, he graduated from the University of Louisville School of Medicine in 1912. He interned at St. Joseph's Infirmary and studied at St. Vincent's Hospital in New York. For three years he studied at the Mayo Clinic before returning to Louisville to practice. In 1951, Dr. Henry was honored in a special ceremony at St. Joseph's for his long service there.

L. LYNE SMITH, M. D.

Louisville

1877 - 1955

Dr. Smith died at St. Joseph Hospital in Louisville on June 3, 1955, at the age of 78. He had continued his practice until three weeks before his death, when he became ill.

Dr. Smith came to Louisville from Covington in 1922. He studied at Transylvania College and was a graduate of the University of Louisville School of Medicine. He was a member of the Jefferson County Medical Society, and the American Diabetes Society. He served as a captain in the Medical Corps during World War I.

THEODORE H. HOLLINSHEAD, M. D.

Louisville

1870 - 1955

Dr. Hollinshead, age 85, died at his home in Louisville on May 28. He had practiced in Louisville until three years ago when ill health forced his retirement.

He graduated from Hahnemann College in Philadelphia and came to Louisville in 1898 to teach in the old Homeopathic College. He was a member of the Southwestern Homeopathic Society and the Jefferson County Medical Society.

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against ROUNDWORMS

"Ninety per cent of the children passed all of their ascarides . . ."

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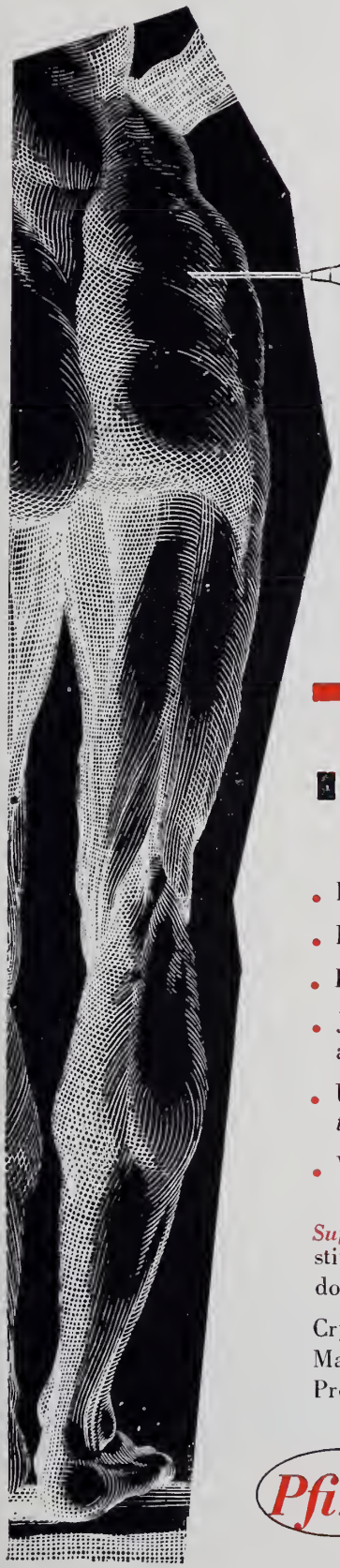

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1. Rechtman, A. M., and Yarrow, M. W.: Osteoporosis, Am. Pract. & Digest Treat. 5:691 (Sept.) 1954.
2. Cannon, P. R.; Frazier, L. E., and Hughes, R. H.: Factors Influencing Amino Acid Utilization in Tissue Protein Synthesis, in Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Inc., 1954, pp. 55-90.

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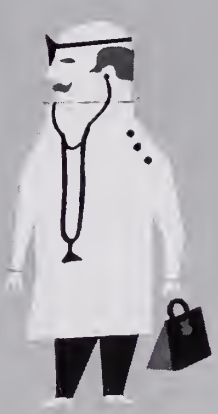

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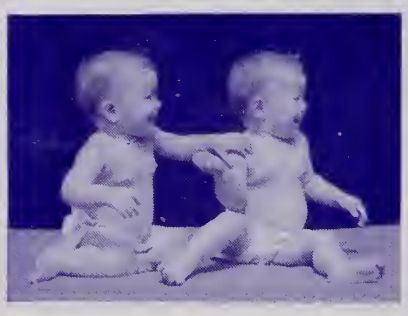

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(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

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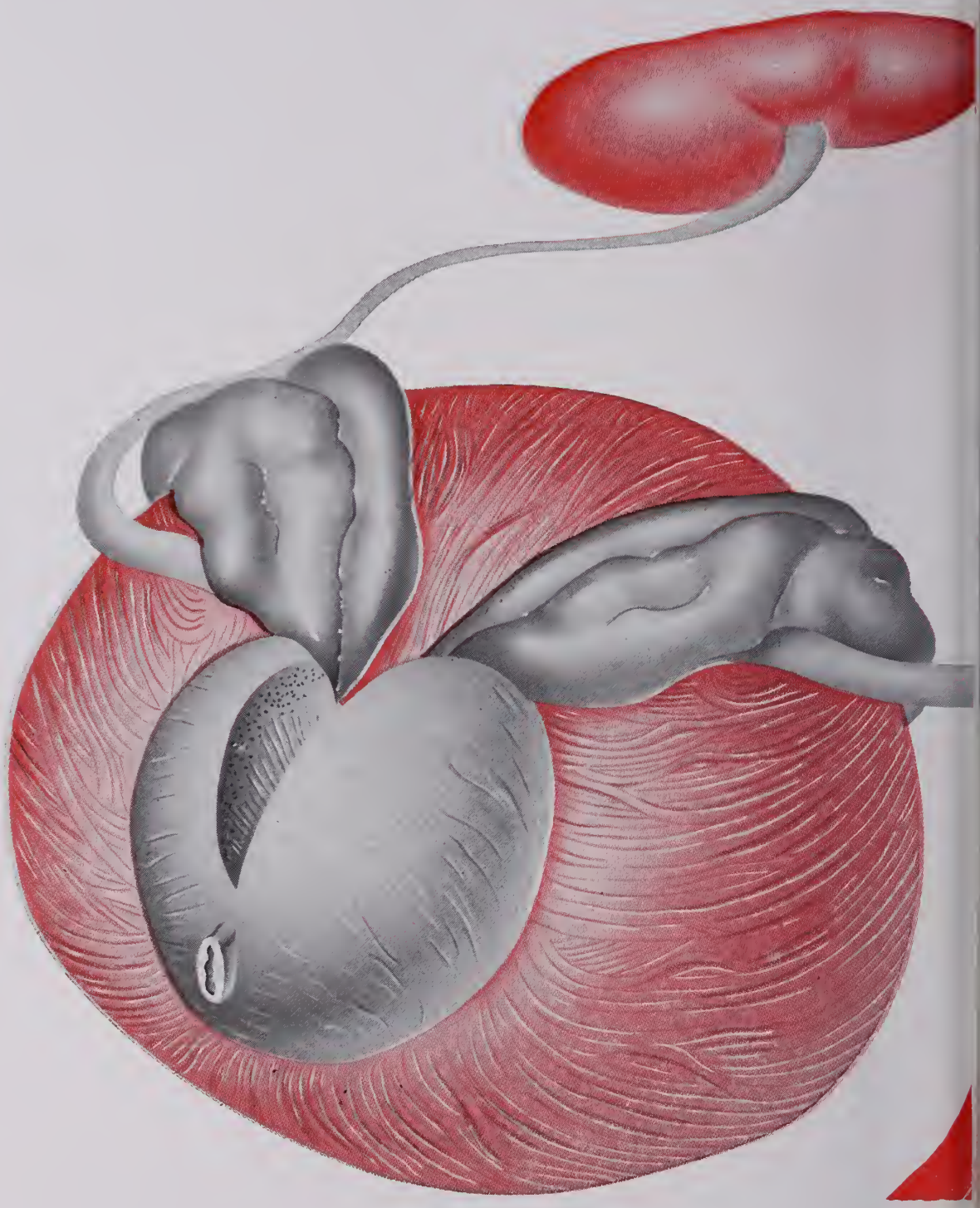

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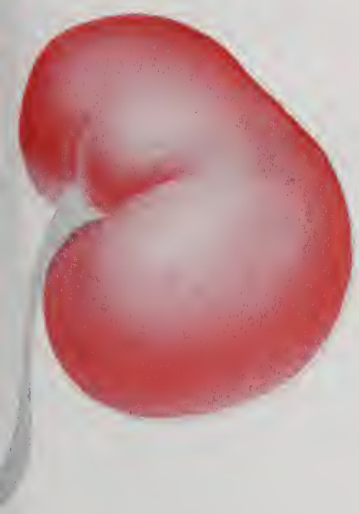

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References (1) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* **5**:365, 1955. (2) Balch, H. H.: Mil. Surgeon **115**:419, 1954. (3) Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W., & Elstun, W.: *J.A.M.A.* **157**:305, 1955. (4) Kutscher, A. H.; Sequin, L.; Lewis, S.; Firo, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemotherapy* **4**:1023, 1954. (5) Clapper, W. E.; Wood, D. C., & Burdette, R. I.: *Antibiotics & Chemotherapy* **4**:978, 1954. (6) Sanford, J. P.; Favour, C. B.; Harrison, J. H., & Mao, F. H.: *New England J. Med.* **251**:810, 1954. (7) Sanford, J. P.; Favour, C. B., & Mao, F. H.: *J. Lab. & Clin. Med.* **45**:540, 1955. (8) Felshin, G.: *J. Am. M. Women's A.* **10**:51, 1955.

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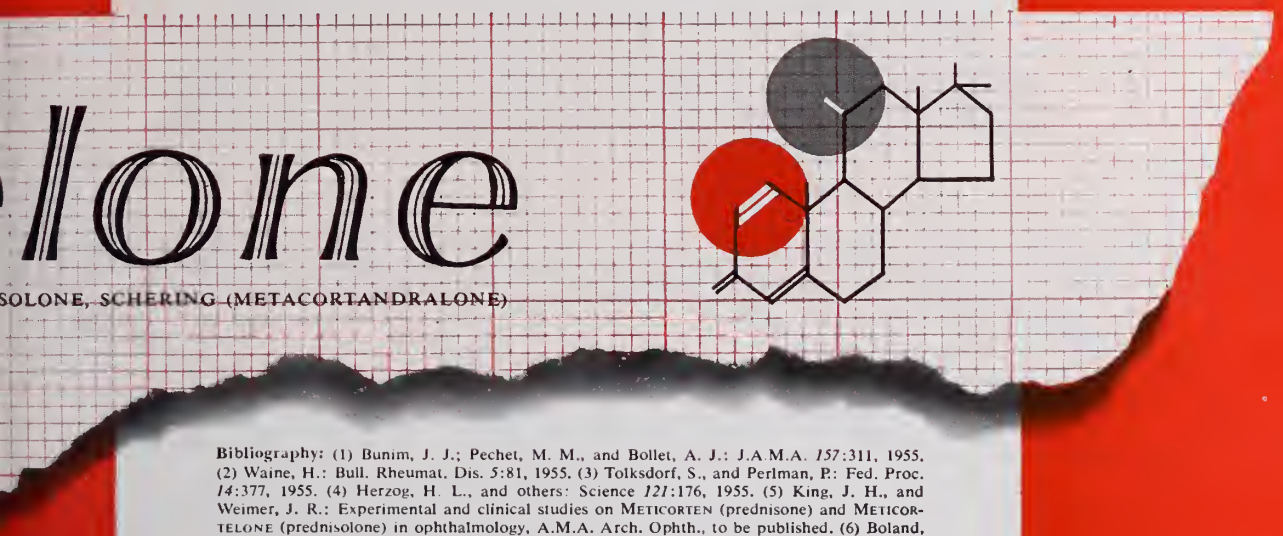

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  certain skin disorders such as disseminated lupus erythematosus,[13,14] acute pemphigus,[13,15] atopic dermatitis[15] and other allergic dermatoses
- more active than hydrocortisone or cortisone, milligram for milligram
- relatively free of significant water or electrolyte disturbances [5]

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METICORTEN,* brand of prednisone (metacortandracin).

ML-J-88 *T.M.

President's Page

The Annual Meeting of our Association is only a very short time away. In keeping with our oft stated policy of being primarily a service organization we can look forward to another excellent scientific program with a feeling of confidence that this obligation has been kept.

This year we will continue to have cooperating specialty groups, nine in number, with outstanding programs for the Thursday afternoon sessions. Better meeting places have been arranged with the objective of making the members much more comfortable.

Color television programs originating at the Louisville General Hospital and telecast to the Columbia Auditorium have been arranged; details of these will be shortly forthcoming. Since they will necessitate beginning our morning sessions at an earlier hour, we wish to urge promptness in keeping this schedule. These programs have been carefully chosen by a special committee, headed by Rudolf J. Noer, M. D., and are beamed at the top level general man.

The general sessions, as always, will be made up of carefully selected, high quality out-of-state talent, plus many of our own members who have a message to bring.

In addition, fine technical exhibits, scientific exhibits, and social functions, including the many class reunions, should bring most of us to Louisville September 27, 28 and 29.

L. C. Sparks

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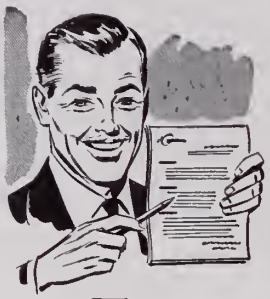

READING TIME—1 MINUTE

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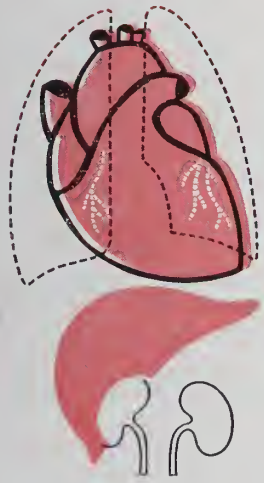

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SOCIAL MEDICINE, ITS DERIVATIONS AND OBJECTIVES: Edited by Iago Galdston, M. D.; for the New York Academy of Medicine Institute on Social Medicine: The Commonwealth Fund, New York; 1949; 294 pages; $2.75.

"Social Medicine" came into being as a result of the report of the New York Academy of Medicine's Committee on Medicine and the Changing Order. It revealed glaring discrepancies in medical thinking between the science itself and the physical services offered the people, to say nothing of serving their emotional and social needs. From these realizations, states Howard Craig, M.D., Director of the Academy, sprang the idea of holding an institute on Social Medicine in connection with the Centennial Celebration of the New York Academy of Medicine. To this institute came some fifty historians, physicians, philosophers, public health and nutrition experts, educators, psychologists and sociologists. What an able representative of each of these fields has to say about social medicine is compiled within the covers of this book, with a foreword, introduction and prologue by Academy officials.

No doctor can afford not to read this book, not so much for practical help in this area of practice, but as a human cultural point of view. It is another example of how freely and smoothly we all can write about something we haven't been doing, but would like to do, or at least to get on the bandwagon. How much these same men have dabbled in this area since they first wrote these words we do not know. I'm sure they have been less rigid, more sympathetic with a weak and struggling humanity and much more confused as they see the complexity of the problem. Here and there it dawns on us doctors that there are experts in this field and that we can learn from them and don't need to feel we have to do this all by ourselves. Interestingly enough, there is not one applied social scientist in this group to give the practical side of the problem. Nevertheless, no greater tribute could be given to American medicine by any group than to bring together outstanding authorities to discuss the Social Side of Medicine. I hope the shortened term of Social Medicine connotes a bid on the part of the medical profession for effective cooperative participation in this field if not a serious leadership role. All tried hard to make positive health the keynote. The public is forcing us doctors to do more than pronounce us "free of disease."

S. Spafford Ackerly, M. D.

REVIEW OF MEDICAL MICROBIOLOGY by Ernest Jawetz, Joseph L. Melnick, and Edward A. Adelberg. Lange Medical Publications, Los Altos, California. 360 pages; $4.50.

The authors' intention in preparing this review has been to make available a brief, accurate, up-to-date presentation of those aspects of medical microbiology which are of particular significance in the fields of clinical infections and chemotherapy. It is directed particularly at the medical student, house officer, and practicing physician. However, because the necessity for a clear understanding of microbiologic principles has increased in recent years as a result of important developments in biochemistry, genetics, chemotherapy, and other fields of direct medical significance, a considerable portion of this Review has been devoted to a discussion of basic science. In general, details of technic and procedure, as well as certain materials of controversial nature, have been excluded.

The authors state that a new edition can be expected every two years. The book is paper bound.

Chapters are devoted to bacterial cytology, metabolism and variation, cultivation and classification of bacteria, special environments, antibacterial agents, chemotherapy, host-parasite relationships, antigens and antibodies, bacteria, spirochetes, medical mycology, principles of diagnostic medical microbiology, rickettsial diseases and the viruses.

Appended in tabular form are: Viral Diseases of Animals, Vaccines for Attempted Prevention of Virus Infections of Animals, Diseases of Animals which may be Transmitted to Man and a short list of books and journals.

Taking the Streptococci as an example of this Review, the authors give briefly their morphology and identification, antigenic structure, toxins and enzymes, classification, pathogenesis and clinical findings, diagnostic laboratory tests, immunity, treatment and epidemiology, prophylaxis and control.

An error noted by this reviewer appears on

(Continued on page 646)

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IN THE BOOKS

(Continued from page 644)

page 147—reference to page 177 should be to page 145. On page 228 appears the statement: "Non-bacterial pneumonias include those associated with tuberculosis, fungous infections, 'primary atypical' pneumonia, and a variety of viral infections." **Corynebacterium hofmanii** is misspelled.

In many instances the authors do not conform to the newer terminology. The Review makes no mention of the Rh factor. The section devoted to rickettsia and viruses is an excellent summary of these subjects.

The authors are to be commended for their coverage in brief of the entire subject of microbiology.

James A. Kennedy, M. D.

RECENT ADVANCES IN MEDICINE AND SURGERY (19-30 April 1954). Based on Professional Medical Experiences in Japan and Korea, 1950-1953. Two volumes. Army Medical Service Graduate School, Walter Reed Army Medical Center, Washington, D. C. Medical Science Publication No. 4. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $1.75.

These two volumes represent complete notes of a course entitled "Recent Advances in Medicine and Surgery" conducted by the Army Medical Service Graduate School, 19-30 April 1954. The course was designed to reflect primarily the professional experiences, problems encountered and lessons learned by the Army Medical Service during the Korean war.

The conclusions drawn from the results of these experiences should be considered in the light of the circumstances under which the data were collected. For example, in the treatment of acute amebic dysentery, the antibiotic "Fumagillin" was not available for use and therefore does not appear in the list of effective amebacides.

Another example of interpretation of results which were obtained under strict military discipline, and which may, inappropriately, be applied to civilian practice, is the conclusion which the authors arrived at by statistical analysis of data derived from patients with viral hepatitis. In this experiment two groups of patients were studied for duration of acute illness. One group was kept at "strict bed rest," and the other group was permitted "ad lib rest."

Statistical analysis of the results suggested that the ad lib rest group had a slightly shorter duration of acute illness than the strict bed

(Continued on page 717)

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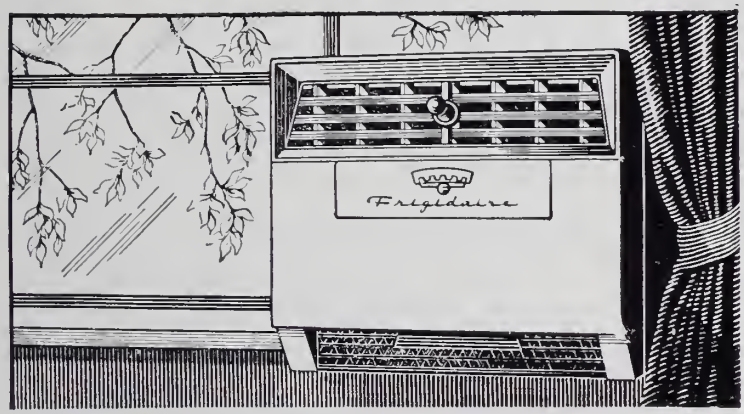

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NEWS

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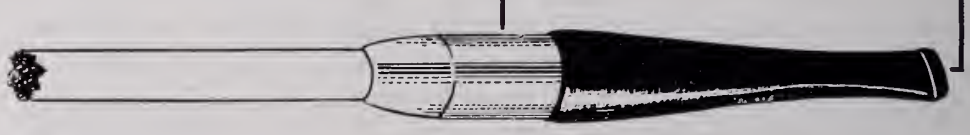
*Independent testing laboratory reports available on request.



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WASHINGTON NEWS DIGEST

Washington, D. C.,—For more than a year the administration has been attempting to work out a system of voluntary, contributory health insurance for Uncle Sam's two million or so civilian employees and their families. It would seem a simple thing to arrange, considering that most big employers have had similar plans in operation for years. At any rate, the plan is ready now for Congress to act on, but putting it together hasn't been easy.

First, there was the question of how to fit in the many already existing health insurance plans (some conducted by U. S. employee unions), and at the same time to offer coverage to government people working and living where no adequate insurance is being offered.

Also, there was wide disagreement as to how much of the premium the federal government should pay; in private industry, employers' contributions range from a small percentage to the entire cost. U. S. employee unions naturally thought the federal government should set an example in generosity.

The program was first outlined early in the year. It then was put on the shelf for two reasons: a few refinements had to be made, and Congress first had to decide how big a pay raise it was going to allow U. S. workers this year before thinking about a fringe benefit, such as health insurance. The whole program was sent to the House and Senate just at the start of the adjournment rush, with the realization that not much could be hoped for this session.

The plan offers U. S. employees the option of signing up with a local non-profit service or indemnity plan, providing 75% of the workers in the particular operation vote for a particular plan and providing that plan is approved by the U. S. Civil Service Commission. If the employees can't get together, or if no adequate plan is available locally, they can sign up for a uniform national idemnity plan to be underwritten by one or more large national insurance companies and negotiated by the Civil Service Commission. The proposed law itself lists specifically the original benefits that must be provided by the uniform plan, but authorizes the Commission to readjust them.

Regardless which type coverage the employee selects for himself and his family, the federal contribution would be figured the same way. It could not exceed one third of the total premium, or $19.50 annually for a single person or $52 for one with dependents, whichever figure is the lesser. If the uniform plan is chosen, the single employee could not be charged more than $39 annually, or the one with dependents more than $108 annually. But under any other plan, the employee would pay the difference between the U. S. contribution and the premium cost.

A system of major medical cost or catastrophic insurance also would be provided. Under it the employee would have to pay the first $100 of cost, after benefits of the basic policy had been exhausted, before major medical cost benefits would become available. From that point on, until $10,000 had been paid by the company, the employee would have to pay only 25%.

* * *

The first major medical bill enacted was the extension for another two years of the doctor draft act, which for five years has been furnishing the Armed Forces and the Public Health Service with most of their doctors. Before passage, two changes were made in the law. The maximum age for induction was dropped five years. Under the old law a man could not be taken against his wishes after he had reached his fifty-first birthday; the new law reduced it to his forty-sixth birthday. Also, the law no longer applies to physicians and dentists who have reached their thirty-fifth birthdays and who have been rejected for a medical or dental commission at any time solely on the grounds of physical condition.

Defense Department points out that the man has to be able to demonstrate that he actually applied for a medical or dental commission and was rejected; a 4-F draft board classification is not sufficient. The department also said that the law will not result in the discharge of men already in uniform, even though they could not be inducted under the new law.

As adjournment approached, prospects were that not much more medical legislation would be enacted this session. Most likely of success was a proposal for U. S. grants to states to help finance Salk vaccine costs; the states would decide the priority of age groups, but in a public program there could be no "means test" to determine whether a family could afford to pay. Under this plan the states would receive a certain amount as a straight grant, based on the state's economic need and the number of uninoculated children. If they wanted to put up dollar-for-dollar, the states also could draw on a second account. The bill does not set any limit on U. S. appropriations.

Two other possibilities were bills for a national survey of mental illness (which passed the House early in the session), and for U. S. grants to medical schools.

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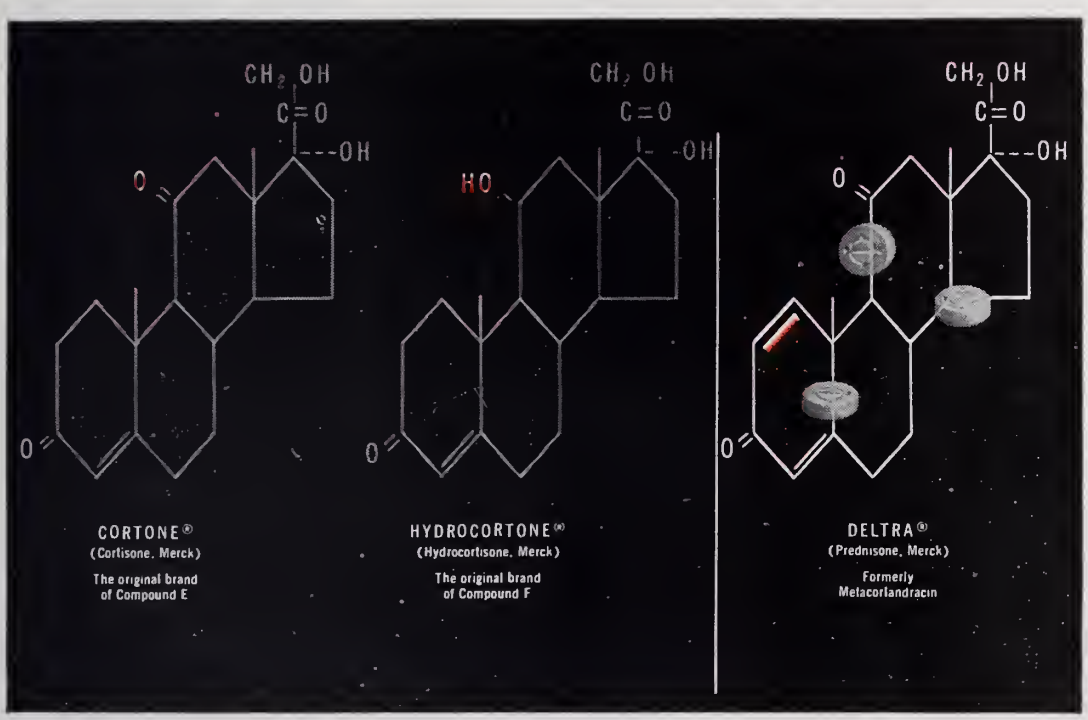

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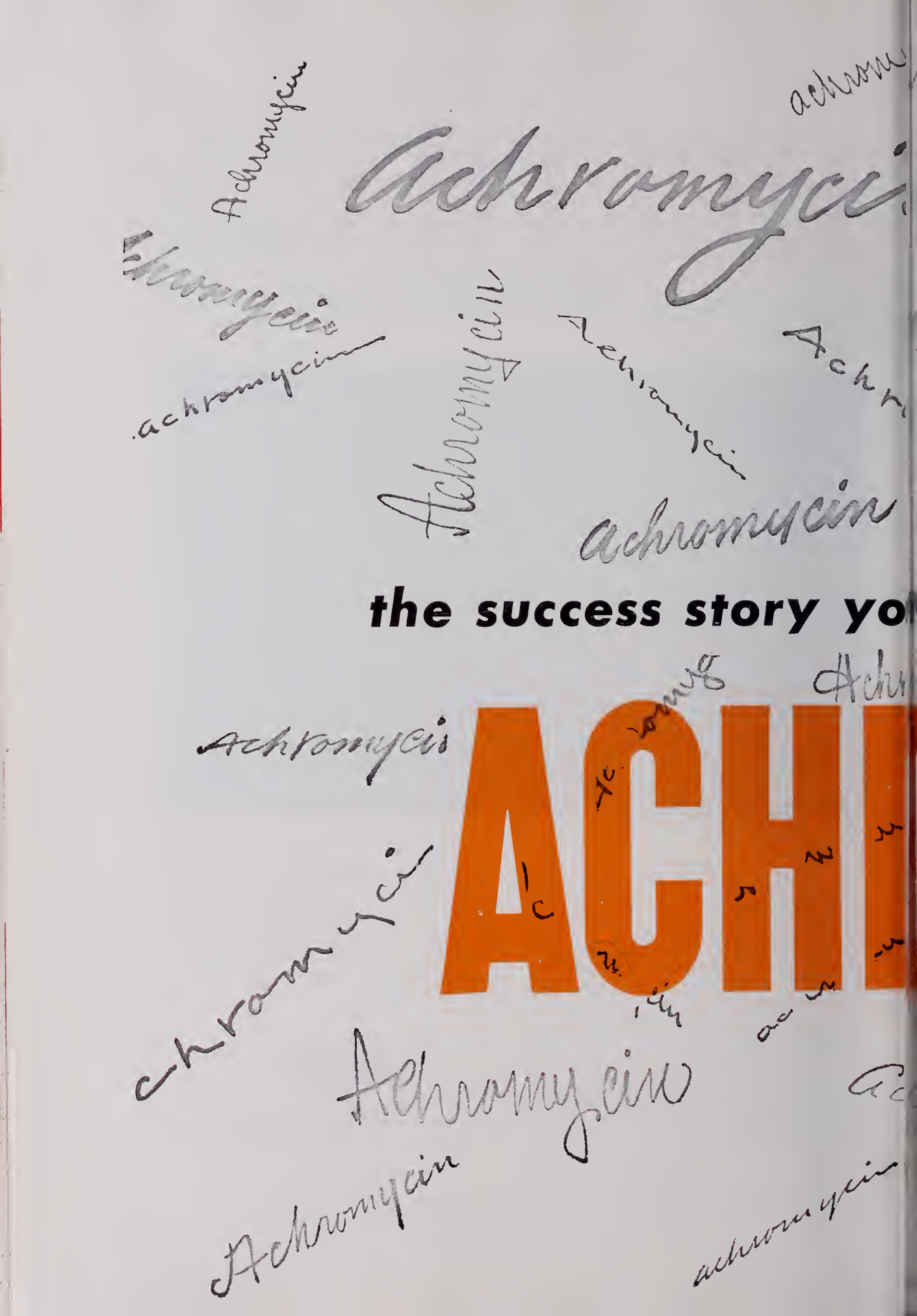
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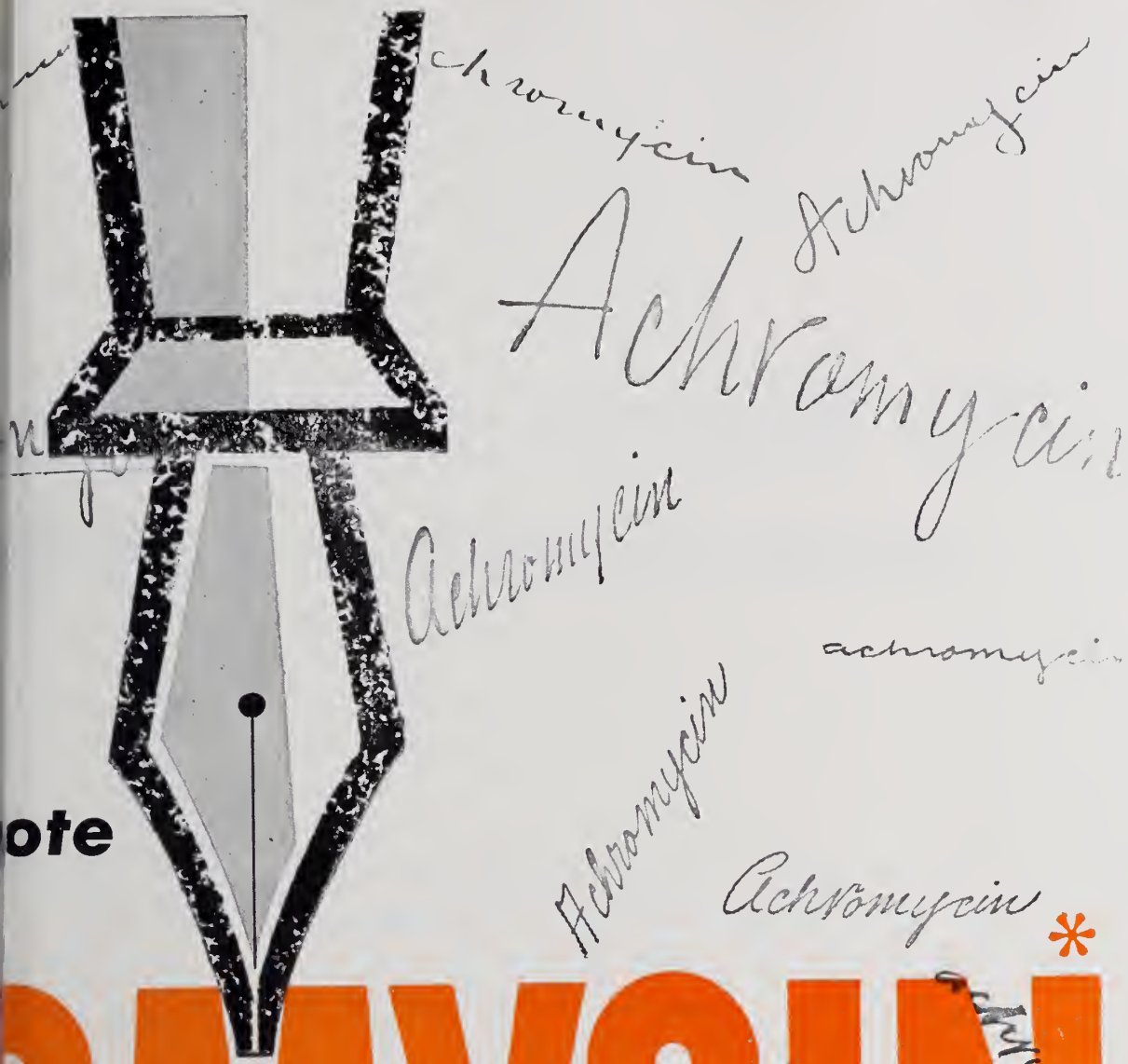

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The JOURNAL of the

Kentucky State Medical Association

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOL. 53 AUGUST 1955 NO. 8

OFFICERS OF KENTUCKY STATE MEDICAL ASSOCIATION

CLYDE C. SPARKS, M. D.

President

J. GANT GAITHER, M. D.

President-Elect

J. Gant Gaither, M. D., Hopkinsville, will take office as president of the Kentucky State Medical Association September 29 at the close of the 1955 Annual Meeting, having been elected to this office at the closing session of the House of Delegates, September 22, 1954.

Dr. Gaither was born in Hopkinsville. He received his Bachelor of Arts degree in 1904 from the University of the South, Sewanee, Tennessee, and his Doctor of Medicine degree from the same university in 1907, having served as president and valedictorian of his graduating class, as well as being Medal-of-Honor man.

He began his practice of medicine at Arcola, Mississippi, in 1907, after interning at Mississippi Charity Hospital at Vicksburg. From 1909 to July, 1912, he was surgeon to the University Hospital, Oxford, Mississippi, under the chancellorship of A. A. Kincannon, M. D.

In 1912 he married Miss Jane Lum of Vicksburg. That same year he returned to his home town, Hopkinsville, to practice medicine in partnership with Preston Thomas, M. D. The Gaithers have two children, a son, Gant, Jr., who is a Broadway producer in New York City, and a daughter, Jane, who married Ian Campbell of Lexington and is now living in Monterey, California.

A member of Grace Episcopal Church, Hopkinsville, since 1899, Dr. Gaither has been a vestryman, lay reader, Junior and Senior Warden during the passing years. He has received many honors from the Episcopal Church.

Dr. Gaither's practice has been restricted to General Surgery. He served in World War I as an instructor in the School of Military Surgery at Camp Greenleaf, Chickamauga, Georgia. For many years following his active duty in the army he was a Lieutenant Colonel in the Medical Reserve Corps.

Dr. Gaither is president of the Board of Trustees of the Jennie Stuart Memorial Hospital at Hopkinsville, a position he has held for the past 15 years. His activities apart from his profession are numerous. He has done a great deal of personal work in the Alcoholic Anonymous organization. In August, 1954, he was heard on the radio program, *This I Believe.*

In 1924 he became a Fellow of the American College of Surgeons. In addition to his active participation in the affairs of the Kentucky State Medical Association since attending his first meeting in Bowling Green in 1912, he has been an active member of the Southern Medical Association, which he joined in 1910 while still at Oxford, Mississippi.

In 1916, he was Orator in Surgery for the Kentucky State Medical Association. In 1953, he gave the "In Memoriam" address at the Annual Meeting of the Association.

During the past ten years, Dr. Gaither has continued the practice of his specialty in eight or ten counties of Western Kentucky and has been constant in his efforts at helping organized medicine retain its proper position in the economic affairs of the state and nation.

Many observers feel that Dr. Gaither's well-known vigor, wisdom, and most pleasing personality along with his keen sense of humor are all qualities that will make his leadership during this coming year rank with the best the Association has had.

Vice-Presidents

ARTHUR T. HURST, M. D.

Louisville

Dr. Hurst was born in Chillicothe, Ohio, in 1901, moving to Louisville in 1910. His pre-medical and medical training were secured at the University of Louisville School of Medicine; he received his Doctor of Medicine degree in 1925.

In 1926, he completed a rotating internship at Louisville General Hospital and served a senior medical internship there from 1926 to 1927, later becoming resident in pediatrics and medicine. He is an associate professor in medicine at the University of Louisville School of Medicine.

In 1942 he served in the U.S. Naval Reserve as a Lieutenant Commander, being promoted to Commander in 1945. Dr. Hurst is a Fellow of the American College of Physicians, a member of the American Geriatric Society and the American Diabetes Association. He is president of the Transylvania Medical Society and of the St. Anthony Hospital Staff, and is a past president of the Jefferson County Medical Society.

Grant Gaither

PRESIDENT KENTUCKY STATE MEDICAL ASSOCIATION 1955

COLEMAN C. JOHNSTON, M. D.

Lexington

Dr. Johnston was born in Fayette County and received his early education at the Middlesex Preparatory School, Concord, Massachusetts. He received his Doctor of Medicine Degree from the University of Virginia in 1933, and spent four years in surgical residency at the University of Maryland Hospital in Baltimore.

Following his residency, he began the practice of medicine in Lexington in association with Fred W. Rankin, M.D., and in 1940 he entered the Army Medical Corps, becoming chief of the surgical service of the 249th General Hospital in Manila. In 1945 he again became associated with Dr. Rankin in the practice of surgery.

Dr. Johnston is a Diplomate of the American Board of Surgery, a Fellow and member of the Board of Governors of the American College of Surgeons. He is a past president of the Fayette County Medical Society and is a member of the Southern Surgical Association, as well as of the American Medical Association and K.S.M.A.

JESSE T. FUNK, M. D.

Bowling Green

Dr. Funk was born in Bowling Green October 1, 1912. He graduated from the Western Kentucky Teachers College in Bowling Green, where he received a Bachelor of Science degree, and he received his Doctor of Medicine degree in 1937 from Vanderbilt University, Nashville, Tennessee.

His post-graduate hospital training was taken at the Good Samaritan Hospital in Lexington and the St. Thomas Hospital at Nashville. He was a captain in the United States Army Air Force from 1942 to 1945.

Dr. Funk is a Fellow of the American College of Surgeons, a Fellow of the Kentucky Surgical Society, and a member of the Warren-Edmonson County Medical Society and of the American Medical Association. He practices his specialty of general surgery in Bowling Green.

Secretary-Editor

BRUCE UNDERWOOD, M. D.

Louisville

In addition to his duties as general manager, secretary, and editor of the Journal of the Kentucky State Medical Association, Dr. Underwood serves as Commissioner of Health for the Commonwealth of Kentucky.

Dr. Underwood received his degree of Doctor of Medicine in 1937 from the University of Louisville School of Medicine. His internship was served at the William Beaumont Hospital at El Paso, Texas. For several years Dr. Underwood was engaged in public health work in Kentucky and Florida. He is a Diplomate of the American Board of Preventive Medicine.

In 1948 Dr. Underwood was appointed for his first five-year term to the positions of commissioner and secretary-editor, and he was re-elected to serve a second term at the 1953 Annual Meeting. He has served as K.S.M.A. delegate to the A.M.A. since 1950. He has carried his many responsibilities of office in a way to advance the work of organized medicine on a local, state and national scale.

Treasurer

WOODFORD B. TROUTMAN, M. D.

Louisville

Dr. Troutman was first elected to the office of treasurer of K.S.M.A. by the House of Delegates in 1946, his service during the nine-year term having been of inestimable value to the membership.

He was born in Bullitt County in 1897, and was graduated from the University of Louisville School of Medicine in 1921. His internship was spent at McKeesport Hospital, McKeesport, Pennsylvania, and at Bellevue Hospital in New York City.

After practicing general medicine in Louisville for five years, he studied in Vienna, London and Edinburg in 1929, returning to Louisville in 1930 to practice his specialty, cardiology. He served with the Army Air Force during World War II.

Dr. Troutman is a member of the American Heart Association, the American College of Physicians and the American Medical Association.

Speaker

CHARLES A. VANCE, M. D.

Lexington

Dr. Vance will complete the second year of his three-year term as Speaker of the House of Delegates at the 1955 Annual Session. He was Vice-Speaker of the House until elevated to his present position in 1953.

An active member and past president of K.S.M.A., Dr. Vance is at present serving as chairman of the Professional Relations Committee and is on the Medical School Advisory Committee. For many years he has been chairman of the McDowell Home Committee.

Dr. Vance was born in 1880. He graduated in 1903 from the Medical Department of Kentucky University. Certified by the American Board of Surgery, Dr. Vance holds membership in the Southern Surgical Association, the American College of Surgeons, the American Association for the Surgery of Trauma, and is one of the founders and charter members of the Kentucky Surgical Society.

Vice-Speaker

E. W. JACKSON, M. D.

Paducah

Past leadership in the Kentucky State Medical Association, as well as in other medical organizations, qualified Dr. Jackson, the House of Delegates felt, for the office of vice-speaker. He was elected to this office in 1953.

Dr. Jackson served as K.S.M.A. president in 1946, having filled two terms as vice-president prior to his election to this office. In addition, he is a past president of the Southwestern Kentucky Medical Society, the Kentucky Surgical Society, a member of the Southeastern Surgical Congress, the American College of Surgeons and the American Medical Association.

A graduate of the Medical Department of the University of Louisville in 1912, Dr. Jackson served as president of his graduating class. He interned at Louisville General Hospital and Eastern Indiana Hospital.

Delegates to the A. M. A.

W. CLARK BAILEY, M. D.

Harlan

Dr. Bailey, a past president of the Kentucky State Medical Association, completed in June his year as vice-president of the American Medical Association. Since 1944 he has been a delegate to the A.M.A. from Kentucky.

He was born in Harlan in the year 1900. Dr. Bailey has practiced medicine in his birthplace from the time he finished his medical training to the present time. In addition to serving on numerous K.S.M.A. committees, Dr. Bailey is a member of the American Medical Association's legislative committee, and the A.M.A.'s Committee on Medical Care of Workers in the Bituminous Coal Mining Area.

In 1926 Dr. Bailey received his Doctor of Medicine degree from the University of Louisville School of Medicine and took graduate training at the Tuberculosis Hospital in Louisville, the Children's Hospital and Louisville City Hospital.

BRUCE UNDERWOOD, M. D.

Louisville

Dr. Underwood was elected to serve his second full term as a delegate to the A.M.A from the Kentucky State Medical Association in 1953. During that time he has been appointed to serve on a number of reference committees of the A.M.A. House of Delegates.

He is secretary and general manager of K.S.M.A., and editor of the Journal of the Association, which office he has filled since 1948.

KSMA House To Hold 1st Session Sept. 26, at Col. Auditorium

The House of Delegates of the Kentucky State Medical Association will hold its first session during the 1955 Annual K.S.M.A. Meeting Monday evening, September 26, starting at 7:00 p.m., CST in the Columbia Auditorium. Registration for the Delegates starts at 6:00 p.m.

Charles A. Vance, M.D., Lexington, Speaker of the House, said reports, resolutions, and new business would be introduced at the opening session Monday evening and assigned at that time to the various reference committees. Following consideration of the reports by the reference committees Tuesday, the House will again convene Wednesday evening, September 28. Registration for this session of the House will start at 6:00 p.m., and the meeting will begin at 7:00 p.m., in the Columbia Auditorium.

In addition to acting on reports and resolutions, the House, at its second session, will choose new officers and elect five of the 15 councilors. Any K.S.M.A. member in good standing may attend the meeting of the House, Dr. Vance said.

According to the K.S.M.A. By-Laws, each county medical society is entitled to at least one delegate, or a delegate for each 25 members or fraction thereof. As this issue of the Journal meets its deadline, the following counties had certified the delegates listed as their representatives to the 1955 meeting:

DELEGATES - 1955

Adair: George O. Nell, Columbia
Allen: J. W. Meredith, Scottsville
Anderson: Boyd Caudill, Lawrenceburg
Ballard:
Barren: William C. Wells, Glasgow
Bath:
Bell:
Boone: Gladys L. Rouse, Florence
Bourbon: Jesse W. Smith, Paris
Boyd: Wendell V. Lyon, Ashland, James Marvin Keeton, Ashland
Boyle: Chris Jackson, Danville
Bracken: C. F. Haley, Brooksville
Breathitt: Price Sewell, Jr., Jackson
Breckinridge:
Bullitt: Bruce Hamilton, Shepherdsville
Butler: D. G. Miller, Jr., Morgantown
Caldwell: F. P. Giannini, Princeton
Calloway: A. D. Butterworth, Murray
Campbell-Kenton: Vinson Pierce, Covington, Norman Adair, Covington, Robert Hoffman, Ft. Mitchell, Richard Rust, Newport, John Rolf, Covington
Carlisle:
Carroll:
Carter: J. Watts Stovall, Grayson
Casey: Kearney Adams, Liberty
Christian: H. B. Stone, Hopkinsville
Clark: Vernon Kash, Winchester
Clay: W. E. Becknell, Manchester
Clinton: E. A. Barnes, Albany
Crittenden: J. O. Nall, Marion
Cumberland: W. F. Owsley, Burkesville
Daviess: Howell Davis, Owensboro, Horace Harrison, Owensboro
Edmonson: M. B. Wilkes, Jr., Brownsville
Elliott: John F. Greene, Sandy Hook
Estill: R. R. Snowden, Irvine
Fayette: John Scott, Lexington, Theodore Adams, Lexington, Carl Fortune, Lexington, Rankin C. Blount, Lexington, C. C. Johnston, Lexington, R. G. Elliott, Jr., Lexington, L. E. Hurt, Lexington
Fleming: W. A. Graham, Flemingsburg
Floyd: George Archer, Prestonsburg
Franklin: Esten Kimbel, Frankfort
Fulton: R. W. Bushart, Fulton
Gallatin: George Harris, Warsaw
Garrard: Paul J. Sides, Lancaster
Grant: O. A. Cull, Corinth
Graves: Robert A. Orr, Mayfield
Grayson: C. L. Bland, Leitchfield
Green: Jesse M. Dishman, Greensburg
Greenup: J. G. Boggs, Russell
Hancock:
Hardin: C. F. Long, Elizabethtown
Harlan: E. M. Howard, Harlan, Philip J. Begley, Harlan
Harrison: J. P. Wyles, Cynthiana
Hart: Harold L. Speevack, Munfordville
Henderson:
Henry: S. L. Hicks, New Castle
Hickman: V. A. Jackson, Clinton
Hopkins: M. M. Mahr, Madisonville
Jackson:
Jefferson: (Term expires in 1955) Everett H. Baker, Louisville, John P. Bell, Louisville, Byron Bizot, Louisville, Glenn W. Bryant, Louisville, Herbert L. Clay, Jr., Louisville, Carlos A. Fish, Louisville, Hunt B. Jones, Louisville, Charles H. Maguire, Louisville, Roy H. Moore, Louisville, Carlisle Morse, Louisville, John M. Townsend, Louisville, John D. Trawick, Louisville
Jefferson: (Term expires in 1956) Robert H. Akers, Louisville, Melvin Bernhard, Louisville, William C. Buschemeyer, Louisville, Foster D. Coleman, Louisville, Daniel G. Costigan, Louisville, W. Burford Davis, Louisville, Ralph S. Denham, Louisville, Robert

S. Dyer, Louisville, John S. Harter, Louisville, Arthur H. Keeney, Louisville, John S. Llewellyn, Louisville, Alfred O. Miller, Louisville

Jessamine: C. A. Neal, Nicholasville
Johnson: Paul B. Hall, Paintsville
Knott: D. G. Barker, Hindman
Knox: W. P. Clifton, Barbourville
Larue: J. D. Handley, Hodgenville
Laurel: R. E. Pennington, London
Lawrence: J. E. Carter, Louisa
Lee:
Leslie:
Letcher: Carl Pigman, Whitesburg
Lewis:
Lincoln: M. M. Phillips, Crab Orchard
Logan: W. R. Byrne, Russellville
Lyon: J. E. Cotthoff, Kuttawa
Madison: Hubert C. Jones, Berea
Magoffin:
Marion: S. C. Clarkson, Lebanon
Marshall:
Martin:
Mason: J. E. McKinney, Maysville
McCracken: J. A. Ward, Paducah
McCreary:
McLean: Philip J. Malagrino, Sacramento
Meade: Alfred Glattauer, Brandenburg
Menifee: D. L. Graves, Frenchburg
Mercer: T. O. Meredith, Harrodsburg
Metcalfe: E. S. Dunham, Edmonton
Monroe: Jack Martin, Tompkinsville
Montgomery: J. M. Bush, Mt. Sterling
Morgan: H. B. Murray, West Liberty
Muhlenberg: H. H. Woodson, Greenville
Nelson: A. D. Steely, Bardstown
Nicholas: B. F. Reynolds, Carlisle
Ohio:
Oldham: H. B. Mack, Pewee Valley
Owen: Maurice Bowling, Owenton
Owsley: M. B. Gabbard, Booneville
Pendleton: Robert L. McKenney, Falmouth
Perry: C. D. Snyder, Hazard
Pike: T. I. Doty, Pikeville
Powell:
Pulaski: M. R. Holtzclaw, Somerset
Robertson: Perry Overby, Mount Olivet
Rockcastle: George H. Griffith, Mt. Vernon.
Rowan:
Russell: M. M. Lawrence, Jamestown
Scott: H. G. Wells, Georgetown
Shelby: A. D. Doak, Shelbyville
Simpson: L. F. Beasley, Franklin
Spencer: M. H. Skaggs, Taylorsville
Taylor: W. B. Atkinson, Campbellsville
Todd: Ralph D. Lynn, Elkton
Trigg: Leslie Blakey, Cadiz
Trimble:
Union: G. B. Carr, Sturgis
Warren: Tom J. Gilbert, Bowling Green
Washington: R. A. Hamilton, Springfield
Wayne: Frank L. Duncan, Monticello
Webster:
Whitley: H. W. Terrell, Corbin
Wolfe:
Woodford:

Officers To Be Elected by House at 2nd Session, Sept. 28

Officers for the 1955-56 Association year will be elected by the House of Delegates at its second session the evening of Wednesday, September 28, in the Columbia Auditorium. Offices to be filled are as follows:

President-Elect:

(from Central Section) One year

Vice-Presidents:

(from Eastern Section) One year
(from Central Section) One year
(from Western Section) One year

Delegates to A.M.A.

Delegate, (Bruce Underwood, M.D., Louisville) Two years

Alternate, (Coleman Johnston, M.D., Lexington) Two years

(Incumbent officers listed in parentheses)

The offices of Orator in Medicine and Orator in Surgery were discontinued as a result of By-Law changes at the 1953 Annual Meeting.

The Nominating Committee will, according to By-Law direction, make its report of one or more nominees for each of the above offices at the first session of the House, Monday, September 26. Additional nominations may be made from the floor, as provided by the By-Laws, when the House votes on the recommendations of the Nominating Committee at its second session, Wednesday night, September 28.

Council Will Report to House on Year's Actions, Sept. 26

Report of the four meetings of the Council of the Kentucky State Medical Association and the four sessions of its Executive Committee will be made by Council Chairman Branham B. Baughman, M.D., Frankfort, at the first meeting of the House of Delegates, Monday evening, September 26.

The 1955 members of the House will be the first to learn of the many important actions the Council has taken during the past year. Once more, the report will show the extremely heavy load of activity the

COUNCILORS

First District

J. VERNON PACE
Paducah

Second District

*WALTER O'NAN
Henderson

Third District

DELMAS M. CLARDY
Hopkinsville

Fourth District

W. KEITH CRUME
Bardstown

Fifth District

*R. R. SLUCHER
Buechel

Sixth District

L. O. TOOMEY
Bowling Green

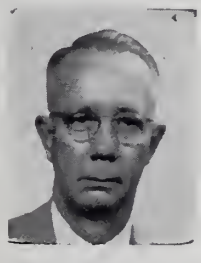
Seventh District

*B. B. BAUGHMAN•
Frankfort

Eighth District

*EDW. B. MERSCH
Covington

Ninth District



J. M. STEVENSON
Brooksville

Tenth District

J. F. VAN METER
Lexington

Eleventh District

HUGH MAHAFFEY
Richmond

Twelfth District

GARNETT J. SWEENEY
Liberty

Thirteenth District

CHARLES B. JOHNSON
Russell

Fourteenth District

JOHN ARCHER
Prestonsburg

Fifteenth District

CHARLES B. STACY
Pineville

* Member, Executive Committee

• Chairman

Council is called on to carry and the great amount of responsibility it must shoulder as the interim governing body of the Association.

"A careful study of the report will clearly reveal the excellent position the Association is in and the splendid direction the Council has given the Association's affairs during the past year," K.S.M.A. President Clyde C. Sparks, M.D., Ashland, said. He continued, "The excellent attendance at the meetings of the Executive Committee and the Council, the many hours of careful deliberation these men devote to their responsibility should make all of us feel very fortunate that we have such strong and seasoned leadership."

Following the retirement of Edward Wilson, M.D., Pineville, councilor for the Fifteenth District, the 1954 Session of the House elected Charles B. Stacy, another Pineville physician, to the post. Incumbents re-elected for three-year terms were Richard R. Slucher, M.D., Buechel, councilor for the Fifth District; L. O. Toomey, M.D., Bowling Green, councilor for the Sixth District; Edward B. Mersch, M. D., Covington, councilor for the Eighth District, and Hugh Mahaffey, M.D., Richmond, councilor for the Eleventh District.

CHARLES B. STACY, M. D.

Pineville

Fifteenth District

Dr. Stacy was born in Canel City, January 18, 1901. He attended Berea College three years and entered the University of Louisville School of Medicine in 1922, receiving his Doctor of Medicine degree in 1926.

He served an internship in the United States Marine Hospital No. 14 at New Orleans, Louisiana. Following his internship he was commissioned as assistant surgeon in U. S. Public Health Service. In 1927 he entered the private practice of medicine at Pineville, and is now on the staff of the Pineville Community Hospital doing general surgery.

Dr. Stacy is a member of the International College of Surgeons, a past president of the Bell County Medical Society and past vice-president of the Kentucky State Medical Association. Dr. Stacy is serving his second term as a member of the Kentucky State Board of Education.

Reference Committee Appointees Named by Speaker Vance

Charles A. Vance, M.D., Lexington, speaker of the House of Delegates, has announced the appointment of the 25 men who will serve on the five Reference Committees, which function between sessions of the 1955 meetings of the K.S.M.A. House of Delegates. Also named is a three-man Credentials Committee and a group of Alternate Committee members.

Dr. Vance said the function of the Reference Committees is most important in expediting the business of the House. He outlined the duties of the Reference Committees as follows:

1. The sixty-odd reports of the officers, council and K.S.M.A. committees and agencies, which are made each year to the House of Delegates, will each be referred to one of the five committees on Monday evening, September 26, when the House holds its first meeting.

2. At 1:45 p.m., Tuesday, the members of the Reference Committees will meet in the Reference Committee room at the Auditorium for a short briefing period and then will go into session at 2:00 p.m.

3. The Committees will hold hearings for two hours, starting at 2:00 p. m. It is during this period that any member of the Association who wants to be heard on one or more issues before the House is warmly urged by the K.S.M.A. official family to be present and make his views known. Dr. Vance said that if a member did not know where to go to be heard during these hearings to see him, any officer of the Association, or member of the Headquarters Staff.

4. Following the hearings, the Reference Committees will go into executive session and study the reports, review the testimony heard, and formulate recommendations on each report assigned to them. The report is then dictated to a stenographer provided by the Headquarters Office.

5. The final duty of the Committees is to present their recommendations on the reports that have been assigned to them at the final meeting of the House of Delegates, Wednesday, September 28.

Following are the names of the delegates who have been appointed by Dr. Vance and the Reference Committees they are to serve on, together with the names of those who will serve on the Cre-

dentials Committee and who make up the Alternate Committee member list:

Reference Committee No. 1—Reports of Officers and Councilors

E. M. Howard, M.D., Harlan, Chairman
Rankin C. Blount, M.D., Lexington, Vice-Chairman
Carlos Fish, M.D., Louisville
C. F. Long, M.D., Elizabethtown
Wendell V. Lyon, M.D., Ashland

Reference Committee No. 2—Reports on Medical Care, Medical Education, Hospitals, and related subjects

W. Vinson Pierce, M.D., Covington, Chairman
Richard G. Elliott, M.D., Lexington, Vice-Chairman
George Archer, M.D., Prestonsburg
Chris Jackson, M.D., Danville
John D. Handley, M.D., Hodgenville

Reference Committee No. 3—Reports on Legislation and Public Relations

Richard J. Rust, M.D., Newport, Chairman
Charles H. Maguire, M.D., Louisville, Vice-Chairman
Carl Fortune, M.D., Lexington
Donald L. Graves, M.D., Frenchburg
Ralph D. Lynn, M.D., Elkton

Reference Committee No. 4—Reports on Miscellaneous Business

T. O. Meredith, M.D., Harrodsburg, Chairman
Price Sewell, Jr., M.D., Jackson, Vice-Chairman
Everett H. Baker, M.D., Louisville
W. E. Becknell, M. D., Manchester
Melvin C. Bernhard, M.D., Louisville

Reference Committee No. 5—Reports on Miscellaneous Business

Roy H. Moore, Jr., M.D., Louisville, Chairman
Frank Duncan, M.D., Monticello, Vice-Chairman
Glenn W. Bryant, M.D., Louisville
A. D. Butterworth, M.D., Murray
Vernon Kash, M.D., Winchester

Credentials Committee No. 6—

H. C. Denham, M.D., Chairman, Maysville
L. E. Hurt, M.D., Lexington
D. G. Miller, M.D., Morgantown

Alternate Committee Members—

J. M. Bush, M.D., Mt. Sterling
Herbert L. Clay, Jr., M.D., Louisville
Robert S. Dyer, M.D., Louisville
H. B. Murray, M.D., West Liberty
Perry Overby, M.D., Mt. Olivet
Carl Pigman, M.D., Whitesburg
B. F. Reynolds, M.D., Carlisle
Paul J. Sides, M.D., Lancaster
Jesse W. Smith, M.D., Paris
H. G. Wells, M.D., Georgetown

Nominating Committee to Meet Prior to First Session of House

The Nominating Committee to propose names of one or more members for each of the general offices of K.S.M.A. to be filled at the 1955 Annual Session will hold an open meeting just prior to the start of the first session of the House of Delegates the evening of September 26 at the Columbia Auditorium.

The Nominating Committee will hold its session in the northeast corner of the main meeting room, starting at 6:00 p.m., and will remain in session until the House of Delegates begins at 7:00 o'clock. Any Delegates or members of the Association who would like to make recommendations to this committee are invited to attend.

Charles M. Edelen, M.D., Louisville, chairman of the committee, made the announcement. He stressed that his committee would welcome recommendations that any Delegate or member would like to make prior to September 26. The recommendations should be directed to him or to other members of the committee, who are: Coleman C. Johnston, M.D., Lexington; Robert W. Robertson, M.D., Paducah; Richard Rust, M.D., Newport; Charles B. Stacy, M.D., Pineville.

According to Section 5, Chapter 5 of the K.S.M.A. By-Laws, the Nominating Committee shall submit its report in writing to the members of the House at the first session of the House. The By-Laws further provide that additional nominations may be made from the floor by submitting the nominations without discussion or comment.

K.S.M.A. members are urged by the Committee on Arrangements to purchase tickets for the President's Luncheon, Wednesday, September 28, at the registration desk at the Auditorium. The same system of reserving seats that worked successfully at the 1954 luncheon will be employed at the 1955 meeting.

House to Elect Five Councilors Sept. 28, at Final Session

The House of Delegates will elect five councilors for three-year terms at its final session in the Columbia Auditorium, Wednesday evening, September 28, Branham B. Baughman, M.D., Frankfort, chairman of the Council, said.

Councilors will be elected for three year terms in the following districts: Second, Seventh, Ninth, Tenth, and Thirteenth. Incumbent councilors, all of whom are eligible to succeed themselves, in these districts are:

Walter L. O'Nan, M.D., Henderson—Fifth

Branham B. Baughman, M.D., Frankfort—Seventh

J. M. Stevenson, M.D., Brooksville—Ninth

J. Farra Van Meter, M.D., Lexington—Tenth

Charles B. Johnson, M.D., Russell—Thirteenth

The method of selecting nominees for the office of district councilor is set forth in Chapter V, Section 6 of the K.S.M.A. By-Laws. It reads:

"The Delegates from the counties in each Councilor District shall form the Nominating Committee for the purpose of nominating a Councilor for the Councilor District concerned. This committee shall hold a meeting open to all active members of the Councilor District concerned who are in attendance at the meeting for the purpose of discussing the nomination for the Councilor to serve the District. Additional nominations may be made from the floor by any member of the House of Delegates when the Nominating Committee makes its report to the House of Delegates."

Dr. Vance Urges County Societies To Submit Names of Delegates

Twenty-four counties have not submitted the names of their official delegates to the 1955 Annual Meeting as the Journal goes to press, according to Charles A. Vance, M.D., Lexington, speaker of the House of Delegates, who urges these counties to do so at the earliest possible date.

According to K.S.M.A. By-Laws every county is entitled to at least one delegate, or a delegate for each 25 active members or major fraction thereof.

Chapter IV, Section 2 of the By-Laws is quoted for the benefit of those counties who have not submitted the names of their delegates:

"In the event there is no duly authorized delegate in attendance at the regular meeting of the House of Delegates the President shall consult any duly elected officer of the component society who is in attendance and with the approval of the Credentials Committee may appoint any active member of the component society in attendance at the meeting as the delegate. In the event there is no duly elected officer of the component society in attendance, the President may make the said appointment with the approval of the Credentials Committee. All appointments made shall also be with the approval of the House of Delegates."

Record Number Technical Exhibits To Feature '55 Session

Sixty-five spaces in the technical exhibit hall at the Annual Meeting in the Columbia Auditorium, September 27, 28 and 29, the largest number on record, have been sold, according to a statement by W. O. Johnson, M. D., Louisville, chairman of the Committee on Technical Exhibits.

"This technical exposition offers our members a golden opportunity to learn about the latest products offered by the pharmaceutical houses, the most recent works in medical literature, the latest developments in equipment and services, about which every physician should know if he is to practice the best and most modern medicine," Dr. Johnson said.

Manning these booths, he pointed out, will be experienced men, specialists in their field and trained to give members of K.S.M.A. practical and up-to-date information on matters of interest to the members. All members are urged by the Committee to visit each booth some time during the meeting.

The Committee on Scientific Assembly has arranged for intermissions to visit the exhibits during the morning and afternoon sessions. The exhibit hall opens at 8:00 each morning, and closes at 5:30 in the afternoons, except Thursday when the exhibit hall will close at 3:30 p.m., following the afternoon intermission. Each company exhibiting in the hall has products approved by the appropriate council of the A. M. A.

Guest Speakers

AUSTIN SMITH, M. D.

Chicago, Illinois

Austin Smith M.D., editor-in-chief and managing publisher of the Journal of the American Medical Association, is the author and/or editor of many books and texts on medical subjects. He is professorial lecturer at the University of Chicago, department of pharmacology.

Dr. Smith holds membership in many medical societies, including the Society of Experimental Biology and Medicine, the American Society for Pharmacology and Experimental Therapeutics, and the American Pharmaceutical Association. He is the executive editor of the World Medical Journal.

He is also a member of the Board of Trustees of the United States Pharmacopeia, and serves on the Medical Advisory Committee of the National Multiple Sclerosis Society. He is chairman of the Board of Directors of the U.S. Committee of the World Medical Association.

"The Changing World for Medicine" is the subject chosen by Dr. Smith for his address before the general assembly on Wednesday afternoon, September 28.

PETER L. SCARDINO, M. D.*

Savannah, Georgia

Peter L. Scardino, M.D., will be remembered by many K. S. M. A. members as one of the featured speakers at the County Society Officers Conference in Lexington last April. Dr. Scardino is chairman of the Chatham County Medical Society's Public Relations Committee.

Dr. Scardino received his degree of Doctor of Medicine from the University of Texas in 1941. He served a rotating internship at St. Louis City Hospital and was a senior intern in surgery at the same hospital in 1942-43.

He was assistant resident of urology in 1947-48 and resident in urology in 1948-49 at Johns Hopkins Hospital, Baltimore, Maryland. In 1951 he was certified by the American Board of Urology. He was a lieutenant commander in the Medical Corps U.S.N.R. from 1942 to 1946.

The topic chosen by Dr. Scardino as guest speaker at the Kentucky Chapter of the American College of General Practice on Thursday afternoon, September 29, is "Cancer of the Genitourinary Tract." On Thursday morning he will speak at the general assembly on "A Case for Social Medicine."

HAROLD J. KULLMAN, M. D.*

Dearborn, Michigan

Harold J. Kullman, M.D., is professor of clinical medicine at Wayne University. He is chief of gastroenterology at the Veterans Administration Hospital in Dearborn and consultant physician at the Wayne County General Hospital at Eloise, Michigan.

Dr. Kullman graduated from Wayne University in 1927 with a degree of Doctor of Medicine, and interned at the Detroit City Receiving Hospital, Detroit, Michigan. He is a Fellow of the College of Internal Medicine and was certified in 1938 by the American Board of Internal Medicine.

Serving as a captain M.C. in the U.S.N.R. from 1942 to 1946, Dr. Kullman's last assignment of active duty was at the United States Fleet Hospital 115 in the Marianas Islands.

On Thursday afternoon, September 29, Dr. Kullman will address the members of the Kentucky Chapter of the American College of Physicians on "Chronic Ulcerative Colitis." His subject for the general assembly Thursday morning session will be "Gastric Ulcer—Criteria for Determining Method of Treatment."

*Indicates that the speaker in addition to addressing one of the General Scientific Sessions of the KSMA Annual Meeting is also scheduled to speak before one of the Specialty groups on Thursday afternoon.

FRANK M. WOODS, M. D.*

Miami, Florida

Frank M. Woods, M.D., Miami, is a lecturer in the department of urology at the University of Miami School of Medicine. He is a member of the Southeastern Section of the American Urological Association, a member of the American Urological Association and of the American College of Surgeons.

Dr. Woods, who was born in Purcell, Oklahoma, received his degree of Doctor of Medicine from the University of Oklahoma School of Medicine in 1935. He took post-graduate training in urology at Bayonne General Hospital, Bayonne, New Jersey.

In 1941, Dr. Woods was certified by the American Board of Urology. He practices his specialty in Miami. During World War II he served in the Navy.

He will address both the general assembly and the Southeastern Surgical Congress during the Annual Meeting. On Tuesday afternoon, September 27, he will have as his topic, "Urologic Pathology of Interest to the General Practitioner," and at the Southeastern Surgical Congress specialty group program on Thursday afternoon, September 29, his subject will be, "A Urologic Perspective of Abdominal Tumors."

WILLIAM TERHUNE, M. D.*

New Canaan, Connecticut

William Terhune, M.D., is the author of numerous articles published in medical magazines and of several books on psychiatry and emotional problems. He is a Diplomate and Examiner of the American Board of Psychiatry and Neurology.

He is a graduate of the Tulane University Medical School, New Orleans. At the present time, he is an associate clinical professor of psychiatry at the Yale School of Medicine and consultant in psychiatry at the New York Psychiatric Institute and Vassar College and Loomis School, as well as to several hospitals and schools in New Canaan.

A founder of The Silver Hill Foundation, Dr. Terhune serves as its medical director. He was a founder and the first medical director of the Connecticut Society for Mental Hygiene, and is a former president of the American Psychopathological Association.

"A Method of Treatment of Alcoholism and the Result" is the subject chosen by Dr. Terhune for his address before the general assembly on Tuesday, September 27. Before the Kentucky Psychiatric Association Thursday afternoon he will talk on the "Re-educational Approach in the Treatment of the Psychoneurosis."

ADMIRAL O. B. MORRISON, Jr.

Petersburg, Virginia

Admiral O. B. Morrison, Jr., has held the rank of rear admiral in the Medical Corps of the United States Navy since 1952. He is now serving as the Commanding Officer of the U. S. Naval Hospital at Portsmouth, Virginia, and is also the District Medical Officer of the Fifth Naval District, Norfolk.

Admiral Morrison received the degree of Doctor of Medicine from the University of Virginia School of Medicine in 1925, and entered the Medical Corps of the Navy following his graduation. He interned at the Naval Hospital at Norfolk and served a period of duty on the staff.

He has served as chief of surgery, and later as executive officer, at the Naval Hospital, Santa Margarita Ranch, Oceanside, California, where he was commended by the commanding officer for outstanding service. Following this, he served as executive officer at the Naval Hospital at Portsmouth, remaining there until March, 1949, after which he was transferred to duty in the Bureau of Medicine and Surgery, Navy Department, Washington, D. C., as director of the personnel division.

Admiral Morrison will speak before the

general assembly on Wednesday afternoon, September 28, the subject of his address being, "The Role of the Medical Department in Today's Navy."

MURRILL J. REEH, M. D.*

Portland, Oregon

Merrill J. Reeh, M.D., is assistant clinical professor in ophthalmology and consultant in ophthalmic pathology at the Oregon Medical School. He is a Fellow of the American College of Surgeons and is president of the Oregon Academy of Ophthalmology and Otolaryngology.

He received a Bachelor of Arts degree from the University of Nebraska in 1928 and a Doctor of Medicine degree from the Nebraska University College of Medicine in 1932. In 1943, Dr. Reeh was certified by the American Board of Ophthalmology.

Dr. Reeh is a Fellow of the American Academy of Ophthalmology and Otolaryngology and is a member of the Association for Research in Ophthalmology.

"Lid and Eyeball Injuries" will be the subject for discussion by Dr. Reeh at the Tuesday morning program before the general assembly, September 27; "Correlation of Pathology and Therapy in Glaucoma" is his topic at the Thursday afternoon program of the Kentucky Eye, Ear, Nose and Throat Society, September 29.

FRANK B. HOWER, D. D. S.

Louisville

Frank B. Hower, D. D. S., Louisville oral surgeon, will represent the Kentucky State Dental Association on the K. S. M. A. Annual Meeting scientific assembly this year. Dr. Hower served as president of the K.S.D.A. in 1944.

Widely known as a leader in dental education, Dr. Hower has been professor of minor oral surgery at the University of Louisville School of Dentistry since 1924. He graduated from the same school in 1919.

Active in dentistry at the national level, Dr. Hower is a past president of the American Society of Oral Surgeons and at the present time is the secretary and treasurer of the society. He is now serving as chairman of the Council on Hospital Dental Services of the American Dental Association, and he is a charter member of the American Board of Dental Surgery.

On Tuesday morning, September 27, Dr. Hower will address the first scientific session of the general assembly. He has chosen "Some Oral Surgery Cases of Interest to the Physician" as the subject of his remarks before the Scientific Assembly.

EDGAR MEDLAR, M. D.*

Ithaca, New York

Edgar Medlar, M. D., chief pathologist of the Division of Tuberculosis of the New York State Department of Health, has spent his full time in research in tuberculosis since 1947. In 1953, Dr. Medlar was the recipient of the Trudeau Medal of the American Trudeau Society.

Dr. Medlar received his medical degree from Harvard University in 1913. He interned at Boston City Hospital and was assistant pathologist at the same hospital from 1915 to 1917. He was certified as a pathologist in 1938.

In March, 1955, the American Review of Tuberculosis published a special 150 page monograph by Dr. Medlar entitled, "The Behavior of Pulmonary Tuberculosis Lesions."

On Tuesday, September 27, Dr. Medler will address the general assembly on the subject, "Some Variations in the Disease, Pulmonary Tuberculosis," and as guest speaker of the Kentucky Chapter of the American College of Chest Physicians on Thursday afternoon, September 29, he will talk on, "The Residue of Disease after Chemotherapy."

The Tennessee Valley Medical Assembly, sponsored by the Chattanooga and Hamilton County Medical Society, will meet at Read House, Chattanooga, October 3 and 4. For hotel reservations write Chattanoogans, Inc., 819 Broad Street, Chattanooga, Tennessee.

DAVID A. DAVIS, M. D.*

Chapel Hill, North Carolina

David A. Davis, M.D., has been head of the department of anesthesiology at the University of North Carolina, located at Chapel Hill, for the past two and one-half years. Prior to this, he was associate professor of anesthesiology at the Medical College of Georgia.

After receiving his degree as a Doctor of Medicine in 1941 from Vanderbilt University, Dr. Davis interned at Charity Hospital in New Orleans, and served a residency there in 1945-46. For a period of two years, he was with the Oschner Clinic in New Orleans.

During World War II, Dr. Davis served as a captain in the U. S. Army. He was certified by the American Board of Anesthesiology in 1949.

On Wednesday afternoon, September 28, Dr. Davis will address the general assembly, having as his subject, "Effect of Anesthetic Agents on the Heart." Dr. Davis is the guest speaker of the Kentucky Society of Anesthesiologists and will address this group on Thursday afternoon, September 29, on "Problems of Anesthesia in Neurosurgery."

ALBERT SEGALOFF, M. D.*

West Haven, Connecticut

Albert Segaloff, M.D., has been assistant professor of clinical medicine at Tulane University of Louisiana, School of Medicine, since 1948. He is director of endocrine research at the Alton Ochsner Medical Foundation, and in 1951, he received the Ciba Award of the Endocrine Society.

He received a Bachelor of Science Degree, with Distinction, from the Sheffield Scientific School, Yale University in 1937, a Master of Science degree from Wayne University in 1939, and his Doctor of Medicine degree from Wayne University College of Medicine in 1943.

He holds membership in numerous professional associations, including the American Federation for Clinical Research, having been secretary of the Southern Section, 1950-52, and president of the section, 1952-53. He was elected to the council for the Southern Society for Clinical Research in 1953. He is also a member of the Laurentian Hormone Conference and the American College of Physicians.

Dr. Segaloff will speak on "Adrenal Cortical Hormones as Therapeutic Agents" before the general assembly on Wednesday, September 28 and on "Adrenal Cortical Hormones as Diagnostic and Therapeutic Agents in Gynecology" before the Kentucky Obstetrical and Gynecologic Society on Thursday afternoon, September 29.

JAMES G. HUGHES, M. D.*

Memphis, Tennessee

James G. Hughes, M.D., is professor of pediatrics at the University of Tennessee School of Medicine. This year he is serving as a special consultant in pediatrics to the World Health Organization and will spend three months in Mexico, Central America and South America to make a study and report on the level of education in the pediatric departments of the Latin American medical schools.

A native of Memphis, he graduated in medicine from the University of Tennessee in 1935 with honors, and after 18 months of rotating internship at the John Gaston Hospital in Memphis, he took a year of residency in pediatrics at the Children's Memorial Hospital in Chicago and another year at John Gaston Hospital.

He is the author of a textbook on pediatrics, is a member of the American Board of Pediatrics, the American Pediatric Society and the Society for Pediatric Research. He serves as chairman of the Committee on Medical Education of the American Academy of Pediatrics.

As guest speaker for the Kentucky Chapter of the American Academy of Pediatrics, Thursday, September 29, he will

speak on the subject: "A Practical Approach to Behavior Problems." At the general assembly, Wednesday morning, September 28, his topic will be: "Convulsive Seizures in Infancy and Childhood."

Dr. Hess to be Featured Speaker at President's Luncheon

"What the Physician Owes His Patient" will be discussed by Elmer Hess, M.D., Erie, Pennsylvania, president of the American Medical Association, at the annual President's Luncheon, Wednesday, September 28, at 11:45 a. m. on the Roof Garden at the Brown Hotel during the annual K.S.M.A. meeting.

The President's Luncheon is one of the top features of the Annual Session. Other dignitaries from the A.M.A. and officers from surrounding state medical associations will be introduced, K.S.M.A. President Clyde C. Sparks, M.D., Ashland, said, in making the announcement.

Dr. Hess, a much sought after and dynamic speaker, has served as president of the Erie County Medical Society, the Medical Society of the State of Pennsylvania, the Section of Urology of the Pan-American Medical Association, the American Urologic Association and the Hess Urological Foundation. He was chairman of the A.M.A. Council on Medical Service from 1952 to 1954, and served as a spokesman in the A.M.A.'s House of Delegates for more than eight years.

The A.M.A. president, who was installed June 7, 1955, at the 104th Annual Meeting in Atlantic City, will be remembered by many Kentucky physicians as a featured speaker at the 1953 County Society Officers Conference.

The American Dermatological Association is offering a series of prizes for the best essays submitted for original work and not previously published relative to some fundamental aspect of dermatology or syphilology. Cash prizes of $500, $400, $300, and $200 will be awarded. Information may be obtained by writing J. Lamar Callaway, M.D., Secretary, American Dermatological Association, Duke Hospital, Durham, North Carolina.

Nine Specialty Groups to Convene During '55 Annual Meeting

Nine specialty groups, made up of members of the Kentucky State Medical Association, will each sponsor a full afternoon scientific program on Thursday during the 1955 Annual Session at the Columbia Auditorium, K.S.M.A. President Clyde C. Sparks, M.D., Ashland, has announced.

All K.S.M.A. members are free to attend any one of the nine meetings, which will be held simultaneously, moving from one group to another as desired, Dr. Sparks said. He pointed out that the practice of having these groups was initiated at the 1954 Annual Meeting by J. Duffy Hancock, M.D., Louisville, immediate past president of K.S.M.A.

The nine specialty groups will feature different types of programs, including nationally recognized essayists, round-tables and discussion groups. All will have at least one guest speaker.

Several of the groups will present two out-of-state essayists, and the Kentucky Chapter of The American Academy of General Practice will have three topflight guest speakers.

Specialty groups participating in the special program are: Kentucky Society of Anesthesiologists; Kentucky Chapter, American College of Chest Physicians; Kentucky Eye, Ear, Nose and Throat Society; Kentucky Chapter, American Academy of General Practice; Kentucky Obstetrical and Gynecologic Society; Kentucky Chapter, American Academy of Pediatrics; Kentucky Chapter, American College of Physicians; Kentucky Psychiatric Association; Southeastern Surgical Congress.

GP's To Receive Full Credit

K.S.M.A. members of the Kentucky Chapter of the American Academy of General Practice will receive full hour-for-hour credit for their attendance at the 1955 Annual Scientific Assembly, September 27, 28 and 29, H. Burl Mack, M. D. Peewee Valley, president of the Kentucky Chapter of the A.A.G.P., said.

Dr. Mack stated credit would be allowed on an hour-for-hour basis for attendance at the General Scientific Assembly, the Specialty Group meetings and the eight hours of the special closed circuit color television. The colorcasts will start each morning at 8:30 a. m. and each afternoon at 1:30, except there will be no Thursday afternoon broadcasts.

OFFICIAL CALL

ANNUAL MEETING KENTUCKY STATE MEDICAL ASSOCIATION

To the officers and members of the component county societies of the Kentucky State Medical Association.

Meeting Place

The Annual Meeting of the Kentucky State Medical Association will convene at the Columbia Auditorium, Louisville, Kentucky, Tuesday, Wednesday and Thursday, September 27, 28 and 29, 1955. The General Session will be called to order at 8:15 a.m., Tuesday, September 27.

The House of Delegates

The first regular session of the House of Delegates will convene at 7:00 p.m., Monday, September 26; the second regular session will begin at 7:00 p.m. Wednesday, September 28. Both sessions will be held in the Columbia Auditorium.

Registration

The Registration Department will be open in the Columbia Auditorium from 6:00 p.m. to 8:00 p.m., on Monday, September 26; from 8:00 a.m. to 5:00 p.m., on Tuesday, September 27; from 8:00 a. m. to 5:00 p.m., and 6:00 p.m. to 8:00 p.m. on Wednesday, September 28; and from 8:00 a.m. to 5:00 p.m. on Thursday, September 29.

WOMAN'S AUXILIARY to the KENTUCKY STATE MEDICAL ASSOCIATION

Tuesday, September 27, Brown Hotel

Preconvention Board Breakfast, 9:00 a.m., South Room; Formal Opening of the Thirty-third Annual Meeting, 10:30 a.m., South Room; Subscription Luncheon, 12:30 p.m., South Room.

Wednesday, September 28, Brown Hotel

Morning Session 9:00 a.m., South Room; Afternoon Session, beginning with a Subscription Luncheon and Style Show, 1:00 p.m., Crystal Ballroom.

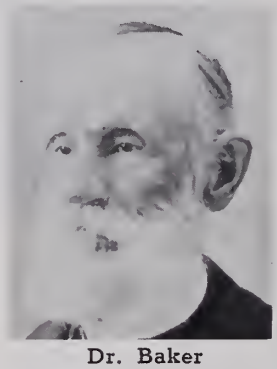
Thursday, September 29, Brown Hotel

Subscription Breakfast and Post-Convention Board of Directors Meeting, 9:00 a.m., South Room.

Registration

The Registration Department of the Woman's Auxiliary will be open in the North Bay of the lobby, Brown Hotel, on Monday, September 26, from 12:00 noon to 5:00 p.m.; Tuesday, September 27, from 9:00 a.m. to 5:00 p.m.; Wednesday, September 28, from 9:00 a.m to 11:00 a.m.

Annual Meeting to Memorialize Jerman Baker, M. D.



Dr. Baker

Jerman Baker, M.D., 17th president of the Kentucky State Medical Association, will be memorialized at the 1955 Annual Meeting of the Association.

Dr. Baker, according to Emmet F. Horine, M.D., Brooks, historian of K. S. M. A., was the oldest and perhaps the most prominent physician in Shelbyville at the time of his election in the year 1875. The Annual Meeting of the Association was held in Shelbyville in this year.

For the past 20 years it has been customary at each Annual Meeting to memorialize a past president of the association, or some other distinguished Kentucky physician. Last year J. W. Thompson, M. D., 16th president of the association, was honored.

Physicians at Annual Meeting May Be Reached Thru WA 6903

The special KSMA Annual Meeting telephone number for incoming calls to physicians attending the Sessions at Columbia Auditorium, September 27, 28 and 29, will be WAbash 6903 for the sixth straight year.

All attending members should leave this number with patients, office, or residence if they wished to be reached during the Annual Sessions.

This telephone is made available through special arrangements with the Southern Bell Telephone Company and Columbia Auditorium. Outbound calls may be made at any of the four booths located near the main entrance of the building.

Eight Hours of Color Television To Feature Scientific Program

Eight hours of closed circuit color television scientific programs will be one of the feature presentations at the 1955 K.S.M.A. Annual Meeting, which will be held at the Columbia Auditorium in Louisville, Tuesday, Wednesday and Thursday, September 27, 28 and 29.

K.S.M.A. President Clyde C. Sparks, M.D., Ashland, chairman of the Committee on Scientific Assembly, said his committee was very grateful to the Smith, Kline and French Laboratories for assigning its equipment and staff to our 1955 Annual Meeting to make possible these highly profitable programs.

On Tuesday and Wednesday there will be three hours of color casting, a one and one-half hour session in the morning and in the afternoon, the morning session starting at 8:30 and the afternoon session at 1:30. On Thursday, there will be one session, a two hour period beginning at 8:30. Dr. Sparks pointed to the advantages of seeing the full program of each one of the video sessions and said his committee urged each member to be prompt in attendance.

Rudolf J. Noer, M.D., professor and head of the department of surgery, University of Louisville School of Medicine, is chairman of the special Color Television Program Subcommittee. Dr. Noer has had previous experience working with the Smith, Kline and French equipment before coming to Kentucky. The programs will originate at the General Hospital and be seen at the Auditorium on the S.K.F.'s giant four by five foot screen.

Dr. Sparks said Dr. Noer and his committee had put together a series of scientific presentations that were "jam-packed" with valuable and diversified highly profitable material. Some programs will require cameras working in three rooms, the viewer watching scenes of an operation, then hearing the procedure explained and watching a pathologist at work before going back to the operation again.

"All of us are deeply appreciative of the splendid work Dr. Noer, his committee and all who will participate in these excellent programs" said Dr. Sparks. These programs will have been rehearsed a minimum of three times before going on the air, he pointed out.

Other members of the Color Television Committee are: Garnett Sweeney, M. D., Liberty, co-chairman; J. C. Bell, M. D., Louisville; Rankin Blount, M. D., Lexington; J. C. Drye, M. D., Louisville; and Lawrence T. Minish, M. D., Louisville.

Reunion Dinners of Ten Classes To Be Held Sept. 29

Reunions for the classes of 1905, '10, '15, '20, '25, '30, '35, '40, '45, and '50 of the University of Louisville School of Medicine will be held Thursday evening, September 29, as dinner meetings, Leslie Shively, director of alumni relations of the University of Louisville, has announced.

The dinners will be held immediately following the cocktail party given by the faculty of the School of Medicine in the Crystal Ballroom at the Brown Hotel, starting at 5:00 p. m. "All members of K.S.M.A. are cordially invited to attend the party," J. Murray Kinsman, M.D., dean of the School of Medicine, said.

"We are delighted that the medical school is holding its 1955 class reunions in connection with our Annual Meeting. We want all graduates and former students of the University to know that they are warmly welcomed to this Annual Session," Clyde C. Sparks, M.D., Ashland, president of K.S.M.A., said.

Having class reunions in connection with the K.S.M.A. Annual Meeting will be a regular feature each year, Mr. Shively said. Following is a list of physicians who will serve as arrangements chairmen for the ten reunions to be held this year:

Class of 1905, Oscar Allen, Beaver Dam
Class of 1910, Charles W. Jefferson, Louisville
Class of 1915, Karl Winter, Louisville
Class of 1920, H. C. Herrmann, Louisville
Class of 1925, Everett Baker, Louisville
Class of 1930, Marion Beard, Louisville
Class of 1935, William M. Ewing, Louisville
Class of 1940, George Sehlinger, Louisville
Class of 1945, Ben Boone, Louisville, and Gene Pierce, New Albany, Ind.
Class of 1950, Hoyt Gardner, Dearborn, Michigan

The Committee on Arrangements urges that K.S.M.A. members wear their badges at all times while attending the Annual Meeting Sessions at Columbia Auditorium, September 27, 28 and 29.

Annual Meeting Program Summary

THE KENTUCKY STATE MEDICAL ASSOCIATION

SEPTEMBER 26, 27, 28, 29, 1955

LOUISVILLE

MONDAY, SEPTEMBER 26

3:00 P. M.	Council Meeting	Louis XVI Room, Brown Hotel
5:00 P. M.	Council Dinner	Louis XVI Room, Brown Hotel
6:00 P. M.	Registration of House of Delegates	Columbia Auditorium
7:00 P. M.	First Meeting of House of Delegates	Columbia Autitorium

TUESDAY, SEPTEMBER 27

7:45 A. M.	Registration	Columbia Auditorium
8:15 A. M.	Opening Ceremonies	Columbia Auditorium
8:30 A. M.	First Scientific Session	Columbia Auditorium
	Color Television, 8:30 to 10:00	Columbia Auditorium
10:50 A. M.	President's Address	Columbia Auditorium
1:30 P. M.	Second Scientific Session	Columbia Auditorium
	Color Television, 1:30 to 3:00	Columbia Auditorium
2:00 P. M.	Reference Committee Meetings	Columbia Auditorium

WEDNESDAY, SEPTEMBER 28

8:30 A. M.	Third Scientific Session	Columbia Auditorium
	Color Television, 8:30 to 10:00	Columbia Auditorium
11:45 A. M.	President's Luncheon for Distinguished Guests	Roof Garden, Brown Hotel
1:30 P. M.	Fourth Scientific Session	Columbia Auditorium
	Color Television, 1:30 to 3:00	Columbia Auditorium
5:00 P. M.	Council Dinner	Louis XVI Room, Brown Hotel
6:00 P. M.	Registration, House of Delegates	Columbia Auditorium
7:00 P. M.	Second Meeting, House of Delegates	Columbia Auditorium

THURSDAY, SEPTEMBER 29

8:30 A. M.	Fifth Scientific Session	Columbia Auditorium
	Color Television, 8:30 to 10:30	Columbia Auditorium
11:40 A. M.	Inaugural Ceremony, Presentation of Awards	Columbia Auditorium
12:15 P. M.	Council Luncheon	Derby Room, Brown Hotel
1:45 P. M.	Specialty Group Meetings (Replacing the regular general session will be nine specialty group scientific programs, which will be held simultaneously. Any K.S.M.A. member may attend any or as many of these meetings as desired).	

A 30-minute intermission has been scheduled during each morning and afternoon Scientific Session for visiting the Scientific and Technical Exhibits.

SCIENTIFIC PROGRAM

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THE JERMAN BAKER MEMORIAL MEETING

COLUMBIA AUDITORIUM

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THE KENTUCKY STATE MEDICAL ASSOCIATION

Tuesday, September 27

COLUMBIA AUDITORIUM

REGISTRATION

7:45 to 8:15 A. M.

OPENING OF GENERAL SESSION

8:15 A. M.

Call to Order by the President

Clyde C. Sparks, M. D., Ashland

Invocation

The Very Reverend Norvell E. Wicker
Dean of Christ Church Cathedral, Louisville

Welcoming Remarks

Gradie Rowntree, M.D., Louisville, President, Jefferson County Medical Society

Tuesday, September 27

FIRST SCIENTIFIC SESSION

8:30 A. M.

Clyde C. Sparks, M. D., Ashland, President, Presiding

***COLOR TELEVISION**

8:30 Greetings and Introduction

Rudolf J. Noer, M.D., Louisville

8:35 Varicose Vein Clinic (1. Diagnosis (2. Stripping

Alvin B. Ortner, M. D., Louisville

8:55 Prostatism

Robert Lich, Jr., M. D., Louisville

9:15 The Diagnosis of Breast Lesions

Rudolf J. Noer, M. D., Louisville

9:35 Splints and Casts in Extremity Immobilization

John Lyford, III, M. D., Louisville

10:00 VISIT EXHIBITS

SCIENTIFIC PAPERS

10:30 Lid and Eyeball Lesions

Merrill J. Reeh, M. D., Portland, Oregon

10:50 President's Address

Clyde C. Sparks, M. D., Ashland
President of K.S.M.A.

11:10 A Method of Treatment of Alcoholism and the Result

William B. Terhune, M.D., New Canaan, Connecticut

11:30 Some Oral Surgery Cases of Interest to the Physician

Frank Hower, D. D. S., Louisville

11:50 Lunch

Tuesday, September 27

COLUMBIA AUDITORIUM

SECOND SCIENTIFIC SESSION

1:30 P. M.

Arthur T. Hurst, M. D., Louisville, Vice-President (Central), Presiding

***COLOR TELEVISION**

1:30 Infant Transfusion Techniques

Alex J. Steigman, M. D., Louisville

1:50 The "Isolette" in Infant Care

Hugh B. Lynn, M. D., Louisville, and Nurses from Children's Hospital

2:10 Squint in Children

Charles T. Moran, M. D., Louisville
Wyant Dean, M. D., Louisville

2:25 Hernia in Children

Hugh B. Lynn, M. D., Louisville

2:40 Practical Considerations in the Diagnosis and Treatment of Common Skin Disorders

A. B. Loveman, M. D., Louisville

***THE COLOR TV BROADCASTS RECEIVED AT THE AUDITORIUM STARTING AT 8:30 A. M. AND 1:30 P. M. CONSTITUTE THE FIRST PART OF THE PROGRAM FOR THAT SCIENTIFIC SESSION.**

3:00 VISIT EXHIBITS

SCIENTIFIC PAPERS

3:30 Some Variations in the Disease, Pulmonary Tuberculosis

Edgar Medlar, M. D., Ithaca, New York

3:50 Urologic Pathology of Interest to the General Practitioner

Frank M. Woods, M. D., Miami, Florida

4:10 Evaluation of Vagotomy and Pyloroplasty in the Treatment of Duodenal Ulcer

Howard E. Dorton, M. D., Lexington

Wednesday, September 28

COLUMBIA AUDITORIUM

THIRD SCIENTIFIC SESSION

8:30 A. M.

Coleman C. Johnston, M. D., Lexington, Vice-President (Eastern), Presiding

*COLOR TELEVISION

8:30 Case Presentation—"Coin Lesion" of Lung

Russell F. Scalf, M. D., Louisville

8:40 Diagnosis of Lung Tumors

Round Table Discussion

9:00 Exploratory Operation—Thoracic "Coin Lesion"

John S. Harter, M. D., Louisville

9:15 The X-ray Diagnosis of Lung Tumors

Everett L. Pirkey, M. D., Louisville

9:30 Operative Views—Exploration of Lung (as above)

John S. Harter, M. D., Louisville

9:45—Pathology of the Operative Specimen, This Case, and Similar Lesions

William M. Christophersen, M. D., Louisville

10:00 VISIT EXHIBITS

SCIENTIFIC PAPERS

10:30 The Role of the Medical Department in Today's Navy

Admiral O. B. Morrison, Jr., U. S. Naval Hospital, Portsmouth, Virginia

10:55 Convulsive Seizures in Infancy and Childhood

James G. Hughes, M. D., Memphis, Tennessee

11:45 Adjournment

PRESIDENT'S LUNCHEON

ROOF GARDEN—BROWN HOTEL

Wednesday, September 28

11:45 A. M.

Clyde C. Sparks, M. D., Ashland, President, Presiding

Invocation

Dr. Duke McCall, Louisville, President, Southern Baptist Theological Seminary

Recognitions

Clyde C. Sparks, M. D., Ashland

What the Physician Owes His Patient

Elmer Hess, M. D., Erie, Pennsylvania President, American Medical Association

Wednesday, September 28

COLUMBIA AUDITORIUM

FOURTH SCIENTIFIC SESSION

1:30 P. M.

Jesse Funk, M. D., Bowling Green, Vice-President (Western), Presiding

*COLOR TELEVISION

1:30 Diagnosis of Common Neurologic Disorders

Ephraim Roseman, M. D., Louisville

1:50 Diagnosis of "Lame Back"

R. Glen Spurling, M. D., Louisville

K. Armand Fischer, M. D., Louisville

2:20 Cardiac Arrhythmias—Diagnosis and Management

J. Murray Kinsman, M. D., Louisville

2:40 Psychiatric Interview

William K. Keller, M. D., Louisville

3:00 VISIT EXHIBITS

SCIENTIFIC PAPERS

3:30 Adrenal Cortical Hormones as Therapeutic Agents

Albert Segaloff, M. D., New Orleans, Louisiana

3:50 The Changing World for Medicine

Austin Smith, M. D., Chicago, Illinois

4:10 Effect of Anesthetic Agents on the Heart

David A. Davis, M. D., Chapel Hill, North Carolina

4:30 Adjournment

Thursday, September 29

COLUMBIA AUDITORIUM

FIFTH SCIENTIFIC SESSION

8:30 A. M.

Clyde C. Sparks, M. D., Ashland, President, Presiding

*COLOR TELEVISION

8:30 Therapeutic Nerve Blocks

Robert P. Bergner, M. D., Louisville

8:50 Cardiac Arrest (animal demonstration)

James C. Drye, M. D., Louisville
Warren H. Ash, M. D., Louisville

9:10 Tracheotomy—Indications and Technique

Herbert T. Ransdell, Jr., M. D., Louisville

9:25 Office Biopsy Procedures

Condict Moore, M. D., Louisville

9:40 X-ray Protection Techniques

Joseph C. Bell, M. D., Louisville

9:55 Surgical Risk of Cardiac Patients and the Aged

Lawrence T. Minish, M. D., Louisville
Samuel Clark, M. D., Louisville

10:15 Common Anal Lesions

William J. Martin, Jr., M. D., Louisville

10:30 VISIT EXHIBITS

11:00 Gastric Ulcer—Criteria for Determining Method of Treatment

Harold J. Kullman, M. D., Dearborn, Michigan

11:20 A Case for Social Medicine

Peter Scardino, M. D., Savannah, Georgia

11:40 Inaugural Ceremony

Branham B. Baughman, M. D., Frankfort, Chairman of the Council, K. S. M. A.

Presentation of Past-President's Key

J. Gant Gaither, M. D., Hopkinsville

12:00 Lunch

Explanation of Thursday Afternoon Programs

Nine specialty groups will present scientific programs simultaneously Thursday afternoon, and there will be no general session. The programs will be held in the Columbia Auditorium, The First Christian Church, and The Calvary Episcopal Church. These nine group meetings will get under way at 1:45 p. m. At 2:45 p. m., a 45 minute intermission to visit the exhibits has been scheduled. At 3:30 p. m. the nine groups will again go into session for the final portion of their programs. K.S.M.A. members are free to move from one group to another during these sessions as desired.

Kentucky Society of Anesthesiologists

1:45 Pediatric Anesthesia

F. Hays Threlkeld, M. D., Owensboro

2:15 Psychological Preparation and Premedication for Pediatric Anesthesia

Lewis Francis, M. D., Lexington

2:45 VISIT EXHIBITS

3:30 Problems of Anesthesia in Neurosurgery

David A. Davis, M. D.
Chapel Hill, North Carolina

4:00 The Problem of Geriatrics in Anesthesia

Guy Morford, M. D., Owensboro

4:30 Adjournment

Kentucky Chapter, American College of Chest Physicians

1:45 Present Status of Cardiovascular Surgery

John S. Harter, M.D., Louisville
J. Ray Bryant, M.D., Louisville
W. Burford Davis, M.D., Louisville

2:15 Case Reports with Films

Robert H. Akers, M. D., Louisville

2:45 VISIT EXHIBITS

3:30 The Residue of Disease After Chemotherapy

Edgar M. Medlar, M. D., Ithaca, N. Y.

4:00 A Study of Pulmonary Cavities With Contract Media

Oren A. Beatty, M.D., Louisville

4:30 Adjournment

Kentucky Eye, Ear, Nose and Throat Society

1:45 Correlation of Pathology and Therapy in Glaucoma

Merrill J. Reeh, M. D., Portland, Oregon

2:45 VISIT EXHIBITS

3:30 Office Management of Conductive Deafness

Eugene L. Derlacki, M. D., Chicago, Ill.

4:30 Adjournment

Kentucky Chapter, American Academy of General Practice

1:45 Rheumatoid Arthritis and What Can Be Done About It

John Sigler, M. D., Detroit, Michigan

2:15 Induction of Labor—Its Indications and Complications

Julian Cole, M. D., Henderson

2:45 VISIT EXHIBITS

3:30 Cancer of the Genitourinary Tract

Peter Scardino, M. D., Savannah, Ga.

4:00 Cardiac Surgery

Charles A. Hufnagle, M. D.
Washington, D. C.

4:30 Adjournment

Kentucky Obstetrical and Gynecologic Society

1:45 Adrenal Cortical Hormones as Diagnostic and Therapeutic Agents in Gynecology

Albert Segaloff, M. D., New Orleans, La.

2:05 Hypotensive Drugs in the Treatment of Toxemia and Other Hypertensive Diseases of Pregnancy

Stanley T. Garber, M. D., Cincinnati, O.

2:25 Comments on the General Medical Aspects of the Above Subjects

Franklin Moosnick, M. D., Lexington

2:45 VISIT EXHIBITS

3:30 Round Table
Dr. Segaloff
Dr. Garber
Dr. Moosnick

4:30 Adjournment

Kentucky Chapter, American Academy of Pediatrics

1:45 A Practical Approach to Behavior Problems

James G. Hughes, M. D.,
Memphis, Tennessee

2:15 Questions and Answers

2:45 VISIT EXHIBITS

3:30 Clinical Partitions in Pediatrics

Frederic N. Silverman, M. D.,
Cincinnati, Ohio

4:00 Questions and Answers

4:30 Adjournment

Kentucky Chapter, American College of Physicians

1:45 Fifty Years in Cardiology

E. F. Horine, M. D., Brooks

2:15 Chronic Ulcerative Colitis

Harold Kullman, M. D., Dearborn, Mich.

2:45 VISIT EXHIBITS

3:30 Anemia—A Symptom Requiring Diagnosis

Leslie Winans, M. D., Ashland

4:00 Some Newer Drugs in Treatment of Pulmonary Tuberculosis

Rudy Gernert, M. D., Louisville

4:30 Adjournment

Kentucky Psychiatric Association

1:45 Use of Social Group Work as a Therapeutic Factor in the Hospital Setting

Edward E. Landis, M. D.
C. G. Gifford, M. S. W., Louisville

2:15 Re-educational Approach in the Treatment of the Psychoneuroses

William B. Terhune, M. D.,
New Canaan, Connecticut

2:45 VISIT EXHIBITS

3:30 Panel on "Chloropromazine" and Discussion

Robert P. Cutler, M. D., Lexington,
Logan Gragg, M. D., Lexington,
Arthur R. Kasey, M. D., Louisville

4:30 Adjournment

Southeastern Surgical Congress

1:45 The Papanicolaou Procedure as an Aid in the Early Diagnosis of Cancer of the Cervix

Vernon Lee, M. D., Covington

2:15 Some Benign Lesions of the Colon

Richard Grise, M. D., Bowling Green

2:45 VISIT EXHIBITS

3:30 A Urologic Perspective of Abdominal Tumors

Frank M. Woods, M. D., Miami, Florida

4:00 The Use of Hyaluronidase in Perforating Appendicitis

Richard H. Weddle, M. D., Somerset

4:40 Adjournment

THIRTY-THIRD ANNUAL MEETING

of the

WOMAN'S AUXILIARY

to the

Kentucky State Medical Association

BROWN HOTEL

Louisville, Kentucky

September 27, 28, 29, 1955

REGISTRATION:

North Bay of Lobby, Brown Hotel

Monday—12 noon to 5 p. m.

Tuesday—9 a. m. to 5 p. m.

Wednesday—9 a. m. to 11 a. m.

Chairman of Registration
Mrs. Maurice Kaufman, Lexington

Tuesday, September 27

9:00 A. M.

Louis XVI Room, Brown Hotel

Preconvention Board Breakfast (subscription). The Board consists of all general state officers, councilors, state committee chairmen, county auxiliary presidents, and three immediate past presidents.

Tuesday, September 27

10:30 A. M.

South Room

Formal opening of the Thirty-Third Annual Meeting of the Woman's Auxiliary to the Kentucky State Medical Association.

Presiding ..... Mrs. Karl D. Winter
Louisville, President

Invocation ..... Mrs. Clyde C. Sparks
Ashland, Immediate Past President

Pledge of Allegiance to the Flag
Mrs. Joseph B. Helm
Smiths Grove, Fourth Vice-President

"I pledge allegiance to the flag of the United States of America and to the Republic for which it stands, one Nation, under God, indivisable, with Liberty and Justice for all."

Pledge of Loyalty ..... Mrs. J. O. Mattax
Carrollton, First Vice-President

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Address of Welcome .. Mrs. Houston W. Shaw
Louisville, President
Jefferson County Auxiliary

Response ..... Mrs. E. W. Jackson
Paducah, Councilor District 1,
and Past President

In Memoriam ..... Mrs. John S. Harter
Louisville, Editor of Blue Grass News,
and Past President

Presentation of Convention Chairman
Mrs. Earl W. Roles, Louisville

Presentation of Distinguished Guests

Roll Call ..... Mrs. William Cartmell
Maysville, Secretary

Minutes of the Thirty-Second Annual Meeting
Mrs. William Cartmell

Report of the 1955 National Convention
Mrs. Carlisle Morse
Louisville, Councilor of District 5

Report of the Councilor of the Woman's Auxiliary to the Southern Medical Association
Mrs. Lanier Lukins,
Louisville

REPORTS OF OFFICERS:

Treasurer ..... Mrs. William C. Cloyd
Richmond

President-Elect and Organization Chairman
Mrs. R. Ward Bushart,
Fulton

President ..... Mrs. Karl D. Winter

Old Business

New Business

Report of Nominating Committee
Mrs. Clyde C. Sparks, Chairman

Election of Nominating Committee, 1955-56

Presentation of 1955-56 Budget
Mrs. J. Murray Kinsman
Chairman of Finance

Report of Registration . Mrs. Maurice Kaufman

Reports of State Chairmen

12:30 P. M.

South Room—Subscription Luncheon

Informal Round Table Discussions on County Projects during Luncheon

Luncheon in Honor of

Mrs. Robert Flanders ..... Manchester, N. H.
President-Elect, Woman's Auxiliary
to American Medical Association

Mrs. Louis K. Hundley .. Pine Bluff, Arkansas
President, Woman's Auxiliary
to the Southern Medical Association

Invocation ..... Mrs. Garland Clark
Winchester, Second Vice-President

Address ..... Mrs. Robert Flanders

Address ..... Mrs. Louis K. Hundley

2:00 P. M.

South Room

Report of County Auxiliary Presidents

3:30 P. M.

Louis XVI Room

Tea Honoring Distinguished Guests

Warren County Auxiliary ..... Hostesses

All Doctors' Wives Invited

Wednesday, September 28

9:00 A. M.

South Room

Invocation ..... Mrs. James E. Rich
Lexington, Third Vice-President

Roll Call ..... Mrs. William Cartmell

Reading of the Minutes . Mrs. William Cartmell

Announcements ..... Mrs. Earl W. Roles
Convention Chairman

Report of Revisions Committee
Mrs. E. Lee Heflin, Chairman

Address ..... Clyde C. Sparks, M. D.
Ashland, President, K. S. M. A.

Mental Health Panel

Speakers .. Mrs. John A. Serpell, Louisville
Member of the Governor's Council for
the Department of Mental Health
George Wyman, M.D., Lakeland,
Superintendent, Central State Hospital

Election of Officers

Presentation of Distinguished Guests

Installation of Officers .. Mrs. Robert Flanders

Inaugural Address .....Mrs. R. Ward Bushart

Announcement of Committee Chairmen
Mrs. R. Ward Bushart

Final Report of Registration
Mrs. Maurice Kaufman

Adjournment

Wednesday, September 28

1:00 P. M.

Subscription Luncheon and Style Show
In Honor of

Mrs. Robert Flanders ..... Manchester, N. H.
President-Elect, Woman's Auxiliary
to the American Medical Association

Mrs. Louis K. Hundley .. Pine Bluff, Arkansas
President, Woman's Auxiliary to
the Southern Medical Association

Mrs. Clark Bailey ..... Harlan, Ky.
Third Vice-President, Woman's Auxiliary
to the American Medical Association, and
Past President, Woman's Auxiliary,
K.S.M.A.

Past Presidents of the Woman's Auxiliary to
the Kentucky State Medical Association

Invocation ..... Mrs. Clark Bailey

Presentation of Distinguished Guests

Presentation of Past Presidents

Presentation of Officers

Style Show

Thursday, September 29

9:00 A. M.

South Room

Post-Convention Board Breakfast
(subscription) and Meeting

Presiding ..... Mrs. R. Ward Bushart
Fulton, President

STATE CONVENTION COMMITTEE

General Chairman ..... Mrs. Earl W. Roles
Louisville

Registration ..... Mrs. Maurice Kaufman
Lexington

Style Show Luncheon .. Mrs. Robert B. Nolan
Louisville

Hospitality and Hospitality Room
Mrs. Clyde M. Brassfield, Elizabethtown

Publicity .....Mrs. Glenn Bryant
Louisville

Flowers ..... Mrs. Charles Bryant
Louisville

Finance .....Mrs. Glenn Boles
Louisville

Hostess for Tea .... Warren County Auxiliary
Mrs. R. O. C. Green, President

WOMAN'S AUXILIARY TO THE KENTUCKY STATE MEDICAL ASSOCIATION

1954 - 1955

State Officers

President .... Mrs. Karl D. Winter, Louisville
President-Elect . Mrs. R. Ward Bushart, Fulton
Vice-President .. Mrs. J. O. Mattax, Carrollton
Vice-President Mrs. Garland Clark, Winchester
Vice-President . Mrs. James E. Rich, Lexington
Vice-President
Mrs. Joseph B. Helm, Smiths Grove

Recording Secretary
Mrs. William H. Cartmell, Maysville

Corresponding Secretary
Mrs. C. Melvin Bernhard, Louisville

Treasurer
Mrs. William Cloyd, Richmond

Parliamentarian
Mrs. Garnett Bale, Elizabethtown

Advisory Committee

John S. Harter, M.D., Louisville, Chairman
R. Ward Bushart, M.D., Fulton
Samuel Warren, M.D., Lexington

Immediate Past Presidents

Mrs. John S. Harter, Louisville
Mrs. David Woolfolk Barrow, Lexington
Mrs. Clyde C. Sparks, Ashland

District Councilors

1st—Mrs. E. W. Jackson, Paducah
2nd—Mrs. Walter L. O'Nan, Henderson
3rd—Mrs. Gaithel L. Simpson, Greenville
4th—Mrs. Lyman Hall, Campbellsville
5th—Mrs. Carlisle Morse, Louisville
6th—Mrs. Arthur D. Donnelly, Jr., Bowling Green
7th—Mrs. Wyatt Norvell, New Castle
8th—Mrs. Vernon Lee, Covington
9th—Mrs. J. E. McKinney, Maysville
10th—Mrs. John B. Floyd, Jr., Lexington
11th—Mrs. O. P. Clark, Winchester
12th—Mrs. George H. Griffith, Mt. Vernon
13th—Mrs. C. I. Haeberle, Russell
14th—Mrs. John W. Bailey, Wheelwright
15th—Mrs. Samuel H. Flowers, Middlesboro

Committee Chairmen

American Medical Education Foundation: Mrs. Jesse T. Funk, Bowling Green
Benevolence: Mrs. Hugh L. Houston, Murray
Blue Grass News Editor: Mrs. John S. Harter, Louisville
Bulletin: Mrs. Charles B. Johnson, Russell
Cancer: Mrs. B. T. Harris, Lexington
Civil Defense: Mrs. Victor P. Dalo, Louisville
Doctor's Shop: Mrs. Carroll Price, Harrodsburg
Finance: Mrs. J. Murray Kinsman, Louisville
Heart: Mrs. J. A. Poe, Fulton
Historian: Mrs. Phillip Blackerby, Louisville
Legislation: Mrs. Clark Bailey, Harlan
McDowell House: Mrs. Walker Owens, Mt. Vernon
Mental Health: Mrs. Irving Gail, Lexington
Nominations: Mrs. Clyde Sparks, Ashland
Nurse Recruitment: Mrs. G. B. Froage, Paducah
Program—Public Relations: Mrs. J. Andrew Bowen, Louisville
Revisions: Mrs. E. Lee Heflin, Louisville
Rural Health: Mrs. Garnett Sweeney, Liberty
Today's Health: Mrs. A. B. Colley, Owensboro
Tuberculosis: Mrs. Robert J. Dancey, Madisonville

PROPOSED AMENDMENTS
to the
CONSTITUTION AND BY-LAWS
of the
WOMAN'S AUXILIARY
to the
KENTUCKY STATE MEDICAL ASSOCIATION

Constitution

ART. VI Sec. 7 Strike out section 7 Page 3 Substitute as second paragraph of section 5 : "A member of the Kentuc-

ky State Medical Association who is the wife of a physician shall be eligible to associate membership in this auxiliary."

By-Laws

ART. II Sec. 5 Page 9 Add a second paragraph to section 5 "The four (4) vice-presidents, the recording secretary and the treasurer may serve more than one (1) term but not more than three (3) consecutive terms."

ART. II Sec 6 Page 10 Strike out the word "other," insert "these."

ART. II Sec. 7 Page 10 Add a new sentence at the end of this section: "No member may serve on the nominating committee for more than two (2) consecutive years."

ART. III Sec. 4 2nd paragraph Page 13 Insert the word "president-elect" after the word "president." This is to conform with ART II section 5.

ART. IV Sec. 3 Page 15 Add as the second sentence, "The chairman of the standing committees shall not serve more than three (3) consecutive terms."

Visual Aids Provided Essayists

Visual aids equipment for essayists appearing on the Annual Meeting Scientific programs will be provided by Mr. Frank Shook, head of the department of visual aids at the University of Louisville School of Medicine. This is the fourth consecutive year this assistance has been offered to K.S.M.A. members and guest speakers at the General Scientific Assembly sessions.

Mr. Shook will be assisted by members of his staff, all skilled in the use of visual aid equipment, according to the Committee on Arrangements. A professional operator will be available at all times to assist the essayists in this aspect of the presentation of their material.

Special Bus Stop Arranged

A special arrangement has been made to have both north and south bound Fourth Street City busses accept and discharge passengers directly in front of Columbia Auditorium during the Annual Meeting September 27, 28 and 29. This service for K.S.M.A. members, their wives and guests, was made possible through the courtesy of John S. Akers, Jr., Superintendent of Schedules of the Louisville Transit Company.

Ky. Chapter, American College of Surgeons To Meet, Sept. 26

The Kentucky Chapter of the American College of Surgeons will hold its annual meeting Monday, September 26, 1955 in the Crystal Ball Room of the Brown Hotel, according to James C. Drye, M.D., Louisville, secretary and treasurer. Francis Massie, M.D., Lexington, is president of the chapter.

All K.S.M.A. members are invited to attend the scientific sessions, Dr. Drye said, included in which will be a symposium on trauma headed by nationally recognized surgeons. Henry Asman, M.D., Louisville, is chairman of the program committee.

Carl E. Badgley, M.D., professor and head of the department of orthopedic surgery at the University of Michigan, will discuss unusual problems in common fractures.

Major Edward J. Jahnke, of the Walter Reed Medical Center, will discuss the emergency care of injuries to major peripheral blood vessels. Major Jahnke served in Korea and, later, at Walter Reed, where he handled vast numbers of such cases.

Emergency care and management of injuries to peripheral nerves will be described by Francis Murphy, M.D., of Memphis, Tennessee. Dr. Murphy was chief of the neurosurgical section of the O'Reilly General Hospital from 1942 to 1946. He is now associate professor of neurosurgery at the University of Tennessee.

Another outstanding surgeon is now being obtained to discuss the management of thoracic injuries.

In line with the policy of the Kentucky Chapter of the American College of Surgeons, a paper will be presented by a resident in surgical training in Kentucky each year. This year, B. C. Clegg, M.D., and Sam Weakley, M.D., residents at the Louisville Veterans Administration Hospital, will discuss the use of the paracentesis needle as a diagnostic aid in acute abdominal injuries

Robert W. Robertson, M.D., and W. Burton Haley, M.D., both of Paducah, will conclude the program with a discussion of the treatment of the fractured spleen. Dr. Robertson had experience with this problem during World War II during the Mediterranean campaign and will report on a large series of cases.

A luncheon will be held during the noon hour, and a business meeting will follow the scientific program.

The above view shows the sixth green of the Big Springs Golf Course site of the 1955 Kentucky State Medical Golf Association tournament September 26 - 29.

Golf Tournament To Be Held at Big Springs, Sept. 26-29

The Kentucky State Medical Golf Association will stage its 1955 annual Tournament at the beautiful and difficult Big Springs Country Club course, according to Clifton G. Follis, M.D., Glasgow, chairman of the K.S.M.A. Golf Committee.

Members of K.S.M.G.A. and their guests may play Monday, Tuesday, Wednesday or Thursday, September 26 through 29, Dr. Follis said. He pointed out, however, that only the score made the first day of play will count in the contest for the tournament prizes.

Annual dues for the golf association were set up last year by his committee, Dr. Follis said, in an effort to put the tournament on a more attractive basis to the golfing members of K.S.M.A. and to give the tournament a firm financial footing to work on.

Last year, the first of the new association, was very successful. Two traveling cup trophies were awarded last year, and a third is to be added this year. John A. Hemmer, M.D., Louisville, won possession of the low net trophy, and Kenton D. Leatherman, M.D., Louisville, won the low gross overall cup.

In addition to the above trophies and the new Senior's low gross trophy, each winner will receive a permanent award. Dr. Follis said that many attractive and useful prizes were to be presented this year.

Annual dues to the Association are $5.00 and are remitted to the Secretary of the K.S.M.G.A. at the Headquarters Office of K.S.M.A., 620 South Third Street, Louisville. Other members of the Committee are: Joseph R. Humpert, M.D., Covington, Robert Long, M.D., Louisville, Sam A. Overstreet, M.D., Louisville, and William C. Wolfe, M.D., Louisville.

An Epidemic of Infectious Hepatitis in Calloway County, Kentucky

PRELIMINARY REPORT

U. PENTTI KOKKO, M. D., Dr. P. H.[1]
IRWIN A. SCHAFER, M. D.[2]
HEINZ F. EICHENWALD, M. D.[2]
GRACE DONOVAN, R. N.[2]
JACK I. KARUSH, M. A.[2]
J. D. OUTLAND, M. D.[3]

The significance of infectious hepatitis as a public health problem is increasing rapidly. Since 1952, known cases have tripled in the United States. This ailment now ranks fifth behind measles, venereal disease, streptococcus sore throat, and tuberculosis in prevalence among reported communicable diseases. In 1954, 49,722 cases were reported in the United States with 1,004 cases in Kentucky.

In July, 1954, an outbreak of infectious hepatitis in Calloway County, Kentucky, and the surrounding area came to the attention of the Kentucky State Department of Health. In cooperation with the Communicable Disease Center of the U. S. Public Health Service, a detailed epidemiologic investigation was promptly initiated. The epidemic presents a number of interesting features which are described in the present report. A more detailed analysis, supplemented by results of laboratory studies, is planned for the future.

General Description of the Area

Calloway County is located in the western tip of the State, just west of Kentucky Lake. The economy of the area is chiefly agricultural although small industrial plants exist in the county seat, Murray, a pleasant, prosperous town of 6,000 inhabitants. The total population of Calloway County numbers 20,718 with 823 negroes. Murray represents the economic and civic center of the area and, because of its shopping and amusement facilities, is visited by most of the inhabitants of the county.

The city has a central water supply and sewage system, conforming to all prescribed standards. Repeated tests of drinking water have shown it to be pure. Most homes in the city have adequate plumbing and sanitary facilities; in the rural areas outdoor privies predominate, some of which are poorly maintained. In the county, drinking water is obtained either from deep wells or purchased and stored in cisterns. Many wells and cisterns were tested for bacterial contamination during the course of the epidemic, but generally no evidence of contamination was found.

Within the memory of local physicians, no sharp outbreak of hepatitis had occurred in Calloway County or Murray, although sporadic cases have been reported in the area for a number of years.

Method of Study

An investigation team consisting of two physicians, a nurse, and a statistician worked in Calloway County during the outbreak. All cases reported as hepatitis by private physicians were visited by a physician member of the team to confirm the diagnosis, to obtain a clinical and epidemiologic history and, in those cases where confirmation of the diagnosis from physical examination alone could not be achieved, to obtain a blood and urine specimen for subsequent laboratory analysis. Household contacts of all confirmed cases were examined, often repeatedly, and blood specimens obtained from many of them. In addition, patients and their families were questioned concerning their knowledge of other individuals with similar illness in the surrounding areas, and surveys were performed on various population groups in order to discover otherwise unrecognized cases. Approximately ten percent of the population was sampled during the course of the investigation.

Although the clinical syndrome presented by the patients was typical of infectious hepatitis, a number of sera were tested for the presence of heterophile antibodies and for antibodies to leptospira at the Communicable Disease Center's Laboratories. These studies proved entirely negative.

1. Director, Division of Preventive Medicine, Kentucky State Department of Health.
2. Epidemiology Branch, Communicable Disease Center, Public Health Service, United States Department of Health, Education, and Welfare, Atlanta, Georgia.
3. Director, Calloway County Health Department.

Definition of a Case

Only cases residing in Calloway County with onset of symptoms between July, 1953, and September, 1954, are included in this report. A case of hepatitis was defined as a patient with evidence of liver disease on physical examination. Jaundice or enlarged and tender liver in the absence of other intrinsic pathology were considered diagnostic. A patient was considered "suspect" if a compatible history was obtained and an enlarged liver without tenderness was found. Suspect cases are not included in the present report, and their final status must await completion of some of the more intricate laboratory tests. A total number of 144 cases was reported or discovered by the investigators between July, 1953, and September, 1954.

Distribution of the Cases in Time

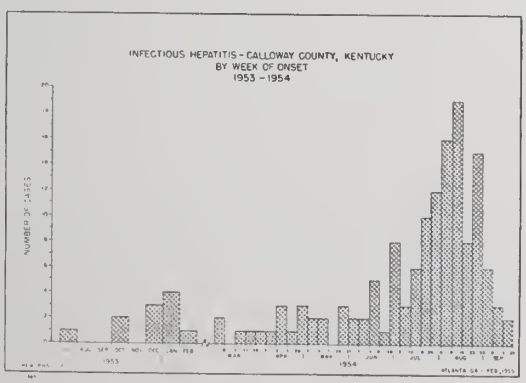
Although scattered cases occurred between July, 1953, and February, 1954, the outbreak did not really commence until the first week in March. From then on, a steady number of cases occurred every week with a gradual increase in incidence beginning in mid June. The epidemic then peaked rapidly and declined. The bar graph in Figure 1 demonstrates the classical characteristics of an infectious hepatitis epidemic in which the disease is spread from person to person. It ranged over a period of at least four months, with a slow straggling spread through the community, eventually coming to a peak and then declining.

Mode of Spread

It has been demonstrated that the etiologic agent of infectious hepatitis is present in the blood and stools of patients during the acute stages of the disease and may persist in the stools during convalescence (1,2,3). The agent possesses all the characteristics ascribed to viruses and is capable of serial transmission in human volunteers (4). The exact way in which infectious hepatitis normally spreads is not entirely known. There is good experimental evidence favoring an intestinal-oral circuit as one of the natural routes of spread. The most common mode of spread is believed to be person to person contact, although explosive water, food, and possibly milk-borne epidemics have been described (5,6,7). Artificial spread of this virus, as well as that of serum hepatitis, through the use of contaminated plasma, blood, syringes, and needles is also possible (8).

In the present epidemic, person to person contact appears to have been the most important factor in the spread of disease. No common source of infection was identified, although three food handlers working in local restaurants were found to have hepatitis. These cases probably served as minor foci of dissemination without appreciably altering the characteristics of the epidemic curve.

FIGURE 1



General Characteristics

The data on age, sex, and status of jaundice are shown in Table 1. It will be noted that the attack rates for all groups up to age 50 were similar. Of particular interest is the fact that only 50 percent of the cases developed jaundice during the course of their illness and that the incidence of jaundice was similar in all age groups. A comparison of the distribution of cases by rural and urban residence shows that the attack rates in the town of Murray were higher than the rates in the surrounding rural areas (Table 2). Two explanations for this disparity exist:

1. Case finding was better in the city than in the country.
2. The outbreak did not appear to have spread through the southwestern part of the county so that the exposed rural population is less than the total rural population.

The reasons for the differences in age specific attack rates between rural and urban areas are not apparent.

Familial Aggregation

The secondary attack rate in infectious hepatitis is high. It has been observed that once a family group becomes infected, the disease progresses until a high proportion of household contacts are affected (9,10).

In Calloway County 52 cases developed among 319 individuals exposed to a family

TABLE 1

DISTRIBUTION OF CASES OF INFECTIOUS HEPATITIS BY AGE, SEX, AND CLINICAL FORM, CALLOWAY COUNTY, 1953-1954

Age	Male Jaun.	Male Not Jaun.	Female Jaun.	Female Not Jaun.	Male Total	Female Total	Estimated Total Population in County M	Estimated Total Population in County F	Attack Rate per 1,000 Pop. M	Attack Rate per 1,000 Pop. F
0 - 9	5	9	4	4	14	8	1,857	1,772	7.5	4.5
10 - 19	10	6	5	5	16	10	1,648	1,586	9.7	6.3
20 - 29	5	3	9	5	8	14	1,597	1,574	5.0	8.9
30 - 39	5	6	10	12	11	22	1,386	1,382	7.9	15.9
40 - 49	4	8	6	2	12	8	1,235	1,308	9.7	6.1
50 and over	1	3	8	9	4	17	2,544	2,698	1.6	6.3
Total	30	35	42	37	65	79	10,267	10,320	6.3	7.7

TABLE 2

CASES OF INFECTIOUS HEPATITIS BY AGE AND RESIDENCE CALLOWAY COUNTY, 1953-1954

Age	No. of Hepatitis Cases Urban	No. of Hepatitis Cases Rural	Population Urban	Population Rural	Attack Rate per 1,000 Pop. Urban	Attack Rate per 1,000 Pop. Rural
0 - 9	10	12	931	2,698	10.7	4.4
10 - 19	5	21	1,062	2,172	4.7	9.7
20 - 29	11	11	1,319	1,852	8.3	5.9
30 - 39	18	15	808	1,960	22.3	7.7
40 - 49	8	12	700	1,843	11.4	6.5
50 and over	7	14	1,347	3,895	5.2	3.6
Total	59	85	6,167	14,420	9.6	5.9

member with the disease, giving an overall secondary attack rate of 16.3 percent (Table 3). Since the course of the illness in 13 patients was without clinical symptoms, no dates of onset could be established for them. Sixteen cases developed their disease within one week after the onset of the first, or index, case, too soon to have been infected by the index case since the incubation period of infectious hepatitis ranges from 10 to about 40 days, with an average of 23 days. These 16 individuals may therefore be called "co-index cases."

If the co-index cases and the asymptomatic patients for whom no dates of onset are available are excluded, a "true" secondary attack rate of 11.3 percent is found.

The Effect of Gamma Globulin

Stokes et al demonstrated the efficacy of human gamma globulin in the prophylaxis of infectious hepatitis in individuals exposed to the disease (1). He also showed that the biologic was effective even when given as late as one week prior to the expected onset of symptoms and that this prophylactic effect persists for about six weeks.

When the outbreak in Calloway County began to assume major proportions, the local health department recommended that gamma globulin in a dosage of 0.01 cc. per pound of body weight be given to all household contacts of diagnosed cases of hepatitis. Generally, a 2 cc. dose was given to adults and a 1 cc. dose to children under ten years of age.

The effect of gamma globulin on the secondary attack rate is shown in Table 4 A. It is obvious that a marked reduction in rate appears to have been produced. Analysis of the interval between time of onset of the initial case and the time when gamma globulin was given to the rest of the family indicates that the biologic was generally given after a considerable delay, occasioned partly by the period of time required to diagnose the disease (Tables 4 B and 4 C).

Clinical and Special Characteristics

Patients with diagnosed hepatitis in Calloway County generally ran a benign course. No deaths were recorded. In about 80 percent, the disease had an insidious onset, but some patients became abruptly

ill with sudden fever, myalgia, nausea, and vomiting. Table 5 shows the frequency with which various symptoms were reported. Severe lassitude represented the single most frequent complaint and was invariably present in adults. Abdominal discomfort, usually described as an "ache" or "dragging sensation" in the right upper quadrant, but occasionally referred to the lower abdomen, was commonly noted. It was usually accompanied by anorexia, described as a "real dislike for food," and nausea. Sixty-nine percent of the patients experienced an elevation of temperature, usually not above 102°. The actual percentage of patients with fever may have been higher since many individuals who were ill had not taken their temperatures.

Of interest is the frequency with which myalgia was reported early in the clinical syndrome, and particularly striking was the fact that about half of the patients complained of severe pain in the muscles of the lower back. This complaint was so prominent that a number of cases were initially treated for renal infection.

Many female patients reported a variety of menstrual disturbances during, and for several months after, their illness. These ranged from amenorrhea to menometrorrhagia. Some complained only of severe dysmenorrhea.

In 84 percent of the patients, a tender liver was demonstrated on examination by the investigators. Hepatomegaly was also very common, while splenomegaly was found in less than 10 percent of cases.

Only half of the investigated cases were jaundiced during the course of their illness.

About three out of four patients had resumed normal activity within three weeks after onset; however many of these complained of easy fatiguability and irritability. Most of the remaining patients were clinically recovered within one month. Three individuals, all adults over 30 years of age, continued to have severe disabling symptoms for periods in excess of two months.

The disease was milder in children. Their appetite was less affected; gastrointestinal symptoms were not as common, and the majority appeared fully recovered within two weeks.

TABLE 3

INTERVAL BETWEEN ONSET OF INDEX AND SUBSEQUENT CASES CALLOWAY COUNTY, 1953-1954

Time Interval Between Index and Subsequent Cases in Same Household	Urban (Murray)	Rural	Total
Less than 1 week	2	7	9)Co-index
7 - 10 days	–	7	7)cases
11 - 13 days	–	–	–
2 weeks	3	5	8
3 weeks	1	1	2
4 weeks	2	2	4
5 weeks	–	3	3
6 weeks	–	–	–
7 weeks	–	–	–
8 weeks	–	3	3
3 months	–	1	1
6 months	–	1	1
12 months	–	1	1
Total	8	31	39
Asymptomatic non-index cases (No date of onset)	5	8	13
Total non-index cases	13	39	52
"True" secondary cases*	11	25	36
No. susceptibles**	121	198	319
Secondary Attack Rate (%)***	9.1	12.6	11.3

* (Total Non-Index Cases)—(Co-Index Cases)

** (No. of Individuals)—(No. of Index Cases) =(No. of Households)—(No. of Co-Index Cases)

*** ("True" Secondary Cases) -:- (No. Susceptibles)

Discussion

The outbreak of hepatitis in Calloway County presents several interesting features. The age distribution differed from that generally reported in the United States. In most of the outbreaks described in the literature, the highest attack rate occurs in children of school age with a sharp drop in the incidence of disease in the population over 30 years of age. In the present outbreak, the attack rates were rather uniform up through age 50. These facts may possibly be explained on the basis of a susceptible secluded rural population with little previous exposure.

The usual experience in the United States has been that the incidence of jaundice increases directly with age. In Calloway County the ratio of jaundiced to non-jaundiced cases was substantially the same among clinical cases of the various age groups.

Although it is generally thought that hepatitis is most prevalent during the

TABLE 4 A

EFFECT OF GAMMA GLOBULIN ON SECONDARY ATTACK RATES IN FAMILIES CALLOWAY COUNTY

	Total No. Susceptible Contacts	No. of Hepatitis Cases	Secondary Attack Rate (%)
No Gamma Globulin	180	34	15.9
Gamma Globulin	103	2*	1.9

*Both cases asymptomatic. In addition, two index cases had received gamma globulin; one 23 days before onset, the other 45 days before onset.

TABLE 4 B

INTERVAL BETWEEN DATE OF ONSET OF INDEX CASE AND DATE OF ADMINISTRATION OF GAMMA GLOBULIN TO FAMILY MEMBERS IN WEEKS

Interval in weeks	0	1	2	3	4	5	6	7	8	Total
No. of individuals receiving g.g.	26	14	26	7	9	4	11	4	2	103

TABLE 4 C

INTERVAL BETWEEN DATE OF ONSET OF LAST CASE IN HOUSEHOLD AND DATE OF ADMINISTRATION OF GAMMA GLOBULIN IN WEEKS

Interval in weeks	0	1	2	3	4	5	6	7	8	Total
No. of individuals receiving g.g.	36	11	23	7	13	2	6	3	2	103

TABLE 5

FREQUENCY OF VARIOUS SYMPTOMS AND SIGNS IN 163 CASES OF INFECTIOUS HEPATITIS, CALLOWAY COUNTY AND SURROUNDING AREA, 1953-1954

Symptoms or Signs	Percentage With Symptoms	Symptoms or Signs	Percentage With Symptoms
Symptoms.		**Symptoms (Continued)**	
Lassitude	84.0	Arthralgia	19.6
Abdominal Discomfort	76.1	Constipation	19.6
Anorexia	71.8	Sore Throat	19.6
Nausea	71.2	Pruritis	17.8
Fever	68.7	Cough	12.3
Headache	60.1	Coryza	8.6
Myalgia	56.4	Others	4.3
Dark Urine	50.9	**Signs**	
Vomiting	48.5	Tender Liver	84.0
Loss of Weight	40.5	Hepatomegaly	79.8
Backache	34.4	Jaundice	50.9
Light Stools	22.1	Splenomegaly	8.0
Diarrhea	21.5	Lymphadenopathy	1.8

early fall and early winter, in this particular area, the epidemic occurred in midsummer.

It seems certain that a large number of asymptomatic or very mild cases must have occurred in Calloway County which remained undiscovered. Some indirect evidence to support this was available. Schools reopened following the summer vacation soon after the peak of the outbreak had been reached in the community. Since groups of children were now coming into close and prolonged contact, it was felt that an increase in the number of hepatitis cases might result. This view was based on the known fact that classrooms frequently act as important foci in the spread of the disease (10). No increase in cases followed the opening of the school, few new cases occurred among the exposed children or among their families, and the epidemic curve continued to decline.

One might conclude from this that either the physical opportunity for the spread of hepatitis did not exist at school or that most of the pupils had been infected previously in their homes or in the community at large and were thus immune. The latter possibility seems most likely.

The importance of spread in infected households is again emphasized. The prompt administration of gamma globulin to all exposed family members after the initial case has been diagnosed will reduce the high secondary rate. The dosage of 0.01 cc per pound of body weight appears to be no less efficacious than larger amounts.

From a clinical standpoint, this outbreak emphasizes the fact that hepatitis is usually a mild disease and is frequently not accompanied by jaundice.

A history of severe lassitude with anorexia, nausea, and abdominal discomfort should prompt a physician to palpate a patient's liver and to pay particular attention to determine if this organ is tender.

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Bronchiectasis*

W. C. HAMBLEY, M. D.

Pikeville

Bronchiectasis as a symptom has been known for several hundred years. The pathogenesis of this disease has been pondered for 100 years or more. Progress in the understanding and treatment of this condition has occurred mainly during the past 30 years. Since the introduction of antibiotic therapy there has been a decrease in incidence and a change in the character of the symptomatology. The purpose of this discussion is to review some of the problems arising from these changes and attempt to formulate a practical approach to them.

Bronchiectasis may be classified as congenital or acquired. The congenital type refers mainly to the saccular disease which is related to cystic disease of the lungs, is more diffuse in distribution, affects the terminal bronchial tree and except for those cases of segmental or lobar distribution is a medical problem. Only brief reference will be made to it here.

The acquired type, referring to the cylindrical or tubular deformity affecting long segments of bronchus, is usually segmental or lobar in distribution. It is the acquired type for which we must assume more responsibility for the course of the disease.

Emerging from efforts to explain the pathogenesis are certain inescapable facts. Clinically bronchiectasis occurs distal to obstructive lesions whether these are due to a foreign body or to an intrinsic lesion. Where no obstructive component is identifiable, atelectasis is observed during acute episodes and therefore reflects an obstructive component. Pneumonitis is associated with the clinical onset and recurrences. Bronchial dilatation similar to clinical bronchiectasis has been produced experimentally only by the obstructive technique. The permanence of this dilatation has been enhanced by prolonged complete obstruction and/or the introduction of infection, bringing about peribronchial fibrosis and permanent regressive changes in the bronchial cartilage. The dilating mechanism is the production of mucus until equilibrium between secretory pressure and dilating pressure is reached. Certainly complete obstruction is not the rule at the

*Read before the Kentucky State Medical Association at the 1954 Annual Meeting, Louisville, September 21-23.

time bronchiectasis is observed clinically. Infection is the rule. In general then, some elements of obstruction and infection are most strongly implicated in the pathogenesis of acquired bronchiectasis. Bronchial obstruction so observed clinically may be due to cicatricial stenosis as in tuberculosis and other primary infections, foreign body occlusion, intrabronchial neoplasm or adenoma, extrabronchial pressure or erosion, or inspissated bronchial secretions or exudate.

Regardless of the pathogenesis, the clinician is usually faced with a young patient presenting recurrent pneumonitis, chronic productive cough, blood streaked sputum, chest pain, and manifestations of varying degrees of toxicity. Any one symptom or combination may suggest bronchiectasis.

Ten or fifteen years ago the copious morning sputum which would layer in the receptacle may have been pathognomonic. Antibiotic therapy for pneumonitis from any cause has not only reduced the incidence of bronchiectasis but has changed the character of the sputum as to flora and amount. Bronchiectasis siccus was uncommon then, but many cases now have that characteristic. While increased morning sputum is still suggestive of bronchiectasis, recurrent pneumonitis and blood streaking of scantier sputum are increasing in importance. Today the patient with cigarette bronchitis and bronchiolitis or the patient with certain intestinal parasites may produce more morning sputum than the bronchiectatic.

In general, bronchiectasis involves the dependent segments of the lung or lobe. This is usually the case when foreign bodies are present. Tuberculosis produces bronchiectasis in the apical and posterior segments of the upper lobe, and the superior segment of the lower lobe. Any segment may be involved when adenoma and other intrabronchial growths are concerned. The middle lobe is most commonly involved by extrabronchial pressure; viz, lymph node enlargement.

Hemoptysis in bronchiectasis is not common in greater degree than streaking. Occasionally a spoonful may be expectorated. In our patients blood streaked sputum is most commonly seen in bronchitis, secondary to ascaris and strongyloides infestations. This occurs in episodes with elevated temperature, productive cough, chest pain and anorexia. X-ray may reveal increased bronchial markings which may be segmental or diffuse. Commonly there is some degree of eosinophilia, ranging from 6 - 15/H.P.F. Although parasites are mainly a problem of childhood they may be a problem at any age. At the Methodist Hospital of Kentucky, Pikeville, where over 28% of admissions have one or more parasites in the stool, the youngest patient to have intestinal parasites with pulmonary symptoms has been 9 months, while the oldest was 74 years old. The cause of the blood streaking is the migration of the larvae thru the bronchial mucosa into the lumen. On only one occasion have we found a larva by bronchial aspiration. We have found eggs of other parasites where heavy exposure to dust was present. Tuberculosis in our area accounts for more blood streaking of sputum than bronchiectasis.

Chest pain due to bronchiectasis is often absent but when present may range from an ache to a sharp pleuritic type. The location of this pain may be the best clue to the segment involved as x-ray may not be very revealing. Anterior chest pain occurs from upper lobe disease on the left or from the middle and upper lobes on the right. Posterior pain is mainly lower lobe in origin. The lingula on the left and the middle lobe on the right account for the major portion of the anterior chest pain. The basal segments of the lower lobe and occasionally the superior segment of the lower lobe produce the posterior chest pain. Auscultation over the area of pain may reveal a few moist rales or wheezing. When this combination of findings is present, the likelihood of anatomic alteration is increased considerably. Recurrent pneumonitis most strongly suggests the diagnosis of bronchiectasis. Consistent involvement of a segment or lobe with pneumonitis makes it imperative that bronchography be done. Bronchoscopy should be utilized to determine whether or not an intrabronchial obstructive process is present. When the history suggests bronchiectasis but x-rays reveal no localization, bronchoscopy may reveal the segment or lobe by the presence of bronchitis at the orifice. When bronchograms are done, an unfilled segment may reflect inadequate positioning or stenosis of the bronchus. This may be clarified by bronchoscopy.

Neither pleural effusion nor empyema is frequently seen in bronchiectasis because the pleural space is obliterated by pulmonary inflammation. Some bronchiectasis is neglected by the patient until acute or chronic lung abscess is the presenting clinical problem. This is more frequently the case in older patients.

Control of acute contagious diseases of childhood by immunization has been responsible in large measure for the reduction in incidence of bronchiectasis. This has removed the stage upon which pneumonitis developed. The liberal use of antibiotics has removed the consolidation or atelectatic phase from pulmonary infection. Still there remains bronchiectasis of less alarming symptomatology which will require accurate differential diagnostic procedures to separate it from other pulmonary disease with similar symptoms. A careful history is indispensable. Chest x-ray in postero-anterior or lateral projection, sputum examinations to determine flora, stool examination for parasites and ova, bronchoscopy to determine the intrabronchial status, and bronchography for mapping of the bronchial tree are steps necessary to make the differential diagnosis with any degree of accuracy.

The diagnosis of bronchiectasis may be made only on the basis of anatomic alteration as demonstrated by x-ray after intrabronchial instillation of suitable radiopaque substance. Usually a PA and lateral chest x-ray will reveal no more than the presence of some inflammatory process of slight extent in some segment or lobe of the lung. Pleural thickening and basal adhesions to the diaphragm are frequently present. Seldom is honey-combing noted on x-rays. However, the localization of the pneumonitis during repeated episodes is very desirable in determining the segment involved.

Once the diagnosis is made, the treatment is palliative or curative. Palliative therapy is the medical management, consisting of oral and nasal hygiene, antibiotics, expectorants and postural drainage. Usually the medical management of recurrent pneumonitis is antibiotics and expectorants.

Surgery provides the only cure for bronchiectasis. The limitations placed upon surgery are the extent of involvement and the status of the remaining lung. There is no rigid measure of the amount of pulmonary tissue that may be resected, simply because we have no accurate measure of the ability of the remaining lung to meet the pulmonary requirements. There is little question about resecting up to seven segments and still preserving adequate function. Nine segments is the most that can be resected without the patient becoming a respiratory cripple. The major limiting factor is the fibrosis and emphysema present in the remaining lung. This cannot be accurately evaluated since the most accurate appraisal immediately changes when the over expansion of the remaining lung occurs post-operatively. For that reason a conservative attitude should be adopted. Fortunately we are seeing less and less of the extensive involvement.

Bronchiectasis associated with asthma, pulmonary fibrosis and emphysema presents an especially difficult problem. I now have four patients who have severe diffuse emphysema of the upper portions of the lungs with mild to moderate tubular bronchiectasis of the basal segments bilaterally. Surgical management is out of the question for them. The most efficient pulmonary tissue being in their lower lobes, they are in acute distress as soon as mild infection occurs. When they were managed by antibiotics, expectorants and postural drainage alone, the flora changed and they were in distress with moderate sputum for three to four months at a time. If shortly after the onset, bronchoscopic aspiration was accomplished, the flora identified and cultured for sensitivities, the patient had about five to eight days distress and would be comfortable for from four to twelve months until he again had another acute episode.

The major problem is one of a changing bacterial flora as to type and resistance to antibiotics. We culture the sputum in chronic cases and determine sensitivities to antibiotics. There is resistance developing to a greater number of antibiotics. We have several cases whose flora is resistant to three to four of the common antibiotics. One case recently had an organism which was not sensitive to any antibiotic for which we were able to test (8 in number). This, I think is the most urgent indication for the early diagnosis of bronchiectasis instead of relying upon antibiotics to control the repeated infections. Streptomycin should not be used in any non-tubercular infection since it is still our best antibiotic against tuberculosis, and since resistance of acid fast bacilli to it develops rapidly when repeated short courses are given. Any antibiotic should be given in adequate dosage for at least 2 days after the temperature has returned to normal. Employment of aerosol administration of antibiotics and liquifying agents such as Tryptar is necessary only when surgery has been abandoned for any reason. Bronchodilators may be used when there is secondary bronchospasm. Bronchoscopic aspiration of bronchial secretions is the most rapid and efficient means of bronchial toilet.

Summary

Bronchiectasis is a bronchial dilatation apparently secondary to bronchial obstruction and infection. Its clinical course is one of recurrent bronchitis and/or pneumonitis the most prominent symptoms being chronic productive cough, chest pain, hemoptysis and in the more severe cases signs of toxicity. The differential diagnosis revolves mainly around allergic bronchitis, intestinal parasites, intraluminal growths as adenoma and occasionally carcinoma, extrabronchial pressure as in the eroding calcified lymph node and chronic lung abscess. Clinical work-up should include careful clinical history, adequate chest x-rays, culture of the sputum with sensitivities to antibiotics, bronchoscopy and bronchography. The treatment is surgical if curative. The medical management must include specific antibiotics, expectorants, bronchial dilators, and postural drainage. Bronchoscopic aspiration greatly shortens the clinical course in selected cases.

Traumatic Heart Disease

F. ALBERT OLASH, M. D.*

GEORGE W. PEDIGO, JR., M. D. FACP**

Louisville

With the continuing development of our mechanized age, we find that heretofore rare conditions become more and more of a daily occurence. A notable example of this is the frequency of chest injuries as the result of automobile accidents, particularly the so-called "steering-wheel injury". In this situation, the driver of an automobile is suddenly thrown against the steering wheel when his car is rapidly decelerated by an impact. Usually the resultant injury consists of a depressed sternum, a number of fractured ribs and whatever secondary injury may occur as a result of these fractures. Too often one attributes the chest pain and morbidity to the obvious injury (i.e. fractures, pneumothorax, contusions of the chest wall) and not enough attention is given to the prognostically more serious heart trauma which is overshadowed by the other symptoms.

The purpose of this paper is not to present any new concepts of heart disease but to make us all more aware of the common cardiac contusion which is too often overlooked. In this presentation we shall deal with the non-penetrating chest injuries in which myocardial and/or pericardial injury is an accompanying factor.

Frequency and Type of Injury

It is probably impossible to estimate the frequency of cardiac injury in non-penetrating injuries of the chest, and the literature on this subject bears out this impression. Perhaps it will suffice to quote Stroud[1], who states, "The clinical diagnosis of cardiac contusion is made too infrequently. It is my belief that contusions of the heart are fairly common". In our own small series of cases, cardiac contusion was diagnosed in three out of four cases of non-penetrating chest injuries seen in the past year. In fatal chest injuries, cardiac injury is found to occur in about 15% of the cases.[2] Urbach[3] in a review of 1000 autopsies of contusion of the chest, found 185 instances of injury to the heart.

Almost any type of chest trauma can give rise to contusion of the heart. It is not necessary that ribs be fractured. A sudden sharp blow to the chest, leaving no residual external injury, has often been demonstrated to be the factor responsible for cardiac contusion. Contusion of the heart can occur when the chest is struck with a fist as in boxing, or by the sudden impact of a golf ball. The most common cause is that of the steering-wheel injury, and even in these cases it is not necessary for the ribs to be fractured or the sternum to be depressed. In fact, Arenberg[4] observed that the incidence and severity of cardiac injury was less in persons who had suffered broken ribs than in those whose thoracic cage was unbroken. Any part of the heart can be bruised by direct effects of impact; the valves can be torn, the endocardium can be lacerated, or the heart can be ruptured by the hydrostatic effects of suddenly increased intracardiac pressure.

*Instructor in Medicine, University of Louisville School of Medicine, Louisville, Kentucky.

**Assistant Clinical Professor of Medicine, University of Louisville School of Medicine, Louisville, Kentucky.

Pathology

The pathologic picture of myocardial contusion has been described by Moritz[5] and by Gould[6]. Disseminated lesions of variable intensity may be seen. These may vary from petechiae to minute focal lacerations of the muscle. In comparison with myocardial infarctions, traumatic lesions are more hemorrhagic at the onset and the transition from normal to damaged myocardium is more abrupt. Moritz states that "Muscle cells around the lacerations undergo necrosis, infiltration by polymorphonuclear leukocytes takes place, the intramuscular hematomas become organized or absorbed, and the defects are gradually filled in by granulation tissue". Specimens obtained 6 to 18 months after injury show that the injured cardiac muscle fibers have been replaced by connective tissue with a resultant thinning of the wall and possible aneurysm formation. These old scars are frequently identical with the scars of myocardial infarctions. Even in acute cases there may be a very close similarity between the lesions of myocardial infarction and contusion. The demonstration of an atherosclerotic placque at the site of a recent occlusion must be cautiously interpreted in the face of recent chest trauma, because with cardiac contusion a thrombosis can be initiated at the site of an atherosclerotic placque. In the same vein of thought it might be well to mention that Kapp[7] in his recent review of posttraumatic "heart attacks" felt that there was sufficient evidence to warrant consideration of trauma as an important factor in the causation of coronary thrombosis and myocardial infarction in appropriate cases.

Diagnosis

Clinically the most consistent symptom seen in myocardial contusion is the chest pain. More often than not, this is incorrectly attributed to the accompanying rib or chest wall injuries and its significance is overlooked. Various types of clicking sounds, friction rubs or murmurs often are the first evidence to call attention to the

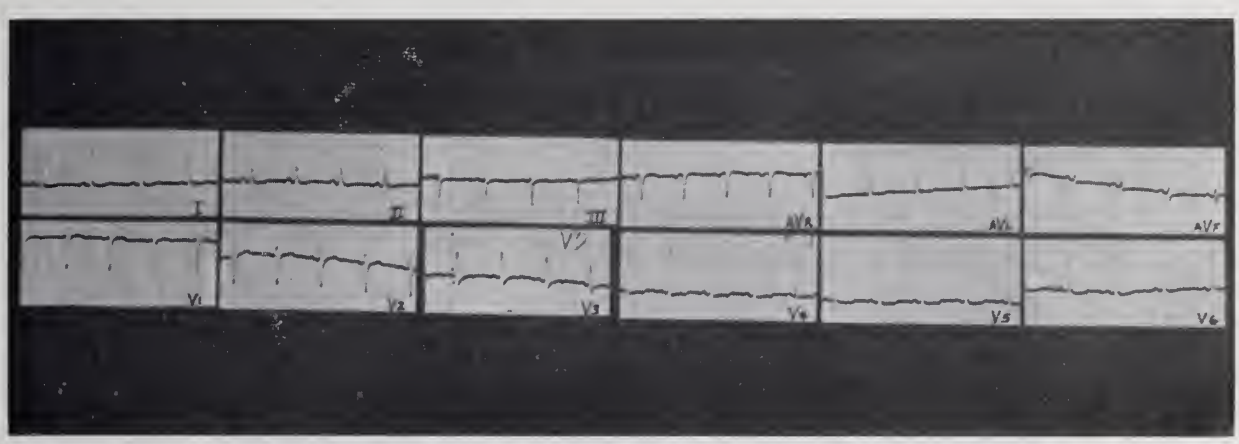

FIGURE 1

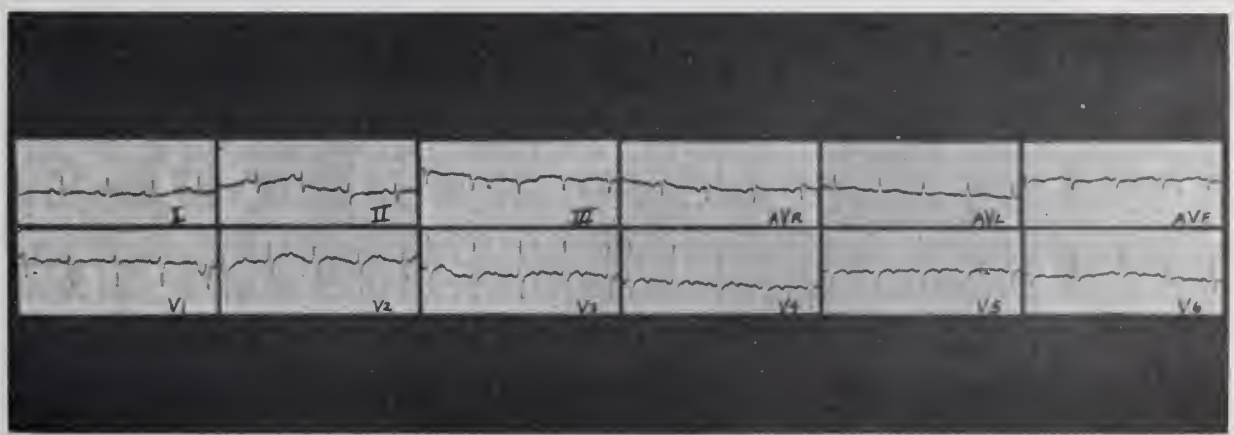

FIGURE 2

underlying myocardial or pericardial damage and their sudden disappearance may be an ominous sign of pericardial effusion or hemorrhage and threatened tamponade. Tachycardia and palpitation are common and almost all types of arrhythmias have been described as occurring. Ventricular fibrillation is frequently the cause of death in the fatal cases. Premature ventricular systoles are common. Early marked dyspnea or even frank pulmonary edema may be seen and can be due to either cardiac failure or severe contusion of the lung[8].

Electrocardiographic changes must be used for confirmation of the diagnosis. The changes seen are variable and depend upon the degree and severity of the damage. Unipolar chest and extremity leads are very helpful in mapping out the areas of injury. No uniform pattern has been described[9]. There may be QRS changes, ST segment deviations or T wave changes. Occasionally ECG changes typical of pericarditis are present. Various degrees of A-V block or IV block may be seen. Tachycardias and premature systoles are not unusual. It is most helpful in injuries of medicolegal significance to have an earlier normal tracing, and follow up tracings showing the involution of the changes. Interestingly enough, the ECG changes secondary to contusion are usually transient and involute to a normal or chronic pattern in much shorter time than those due to coronary heart disease[8].

Treatment

As for treatment of these cases, bed rest is felt necessary for a two to four week period. Oxygen for the first four or five days is usually helpful as is a sedative or opiate. The coronary vasodilator drugs are of doubtful help and anticoagulants are contraindicated. Digitalis may increase the irritability of an already irritable focus and should not be used indiscriminately[2]. If indicated it should not be withheld. Quinidine or Pronestyl usually will control the arrhythmias and should be used prophylactically. A close watch for tamponade should be instituted.

Anderson[10] in his review of non-penetrating injuries of the heart lists what he feels are the various possible end results:

1. Complete recovery
2. Reduced cardiac capacity.

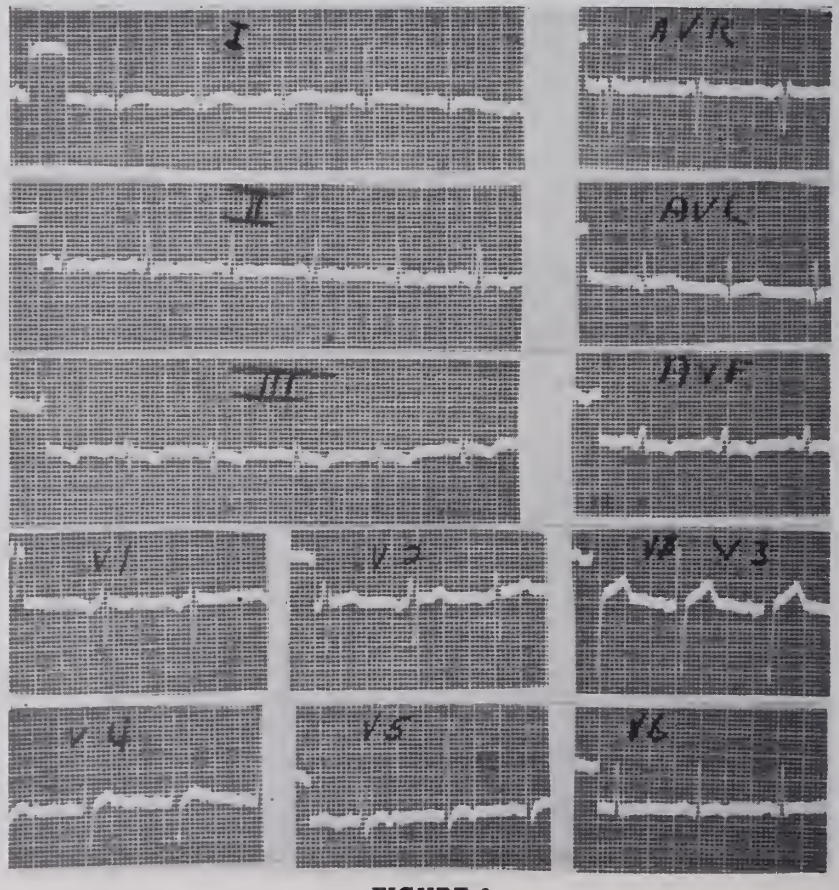

FIGURE 3

3. Pain on effort
4. Congestive failure.

Case Presentations

The following three cases were chest injury cases caused by steering wheel injuries:

Case No. 1

Mr. C. C., a 42 year old male who had a normal electrocardiographic tracing two months before injury. In the accident he had multiple rib fractures but no pneumothorax. Routine electrocardiographic studies showed ST segment depressions and T-wave changes which involuted to normal in three weeks time. (Figure 1.)

Case No. 2

Mr. E. H. C., age 56, had six ribs fractured on the right side of his chest. Subcutaneous emphysema was present. Persistent precordial distress two days post-trauma suggested cardiac damage and the electrocardiogram showed quite pronounced changes. The majority of changes involuted to normal in three weeks, but six months later, flat T waves still persisted in Lead I. (Figure 2.)

Case No. 3

Mr. L. S., age 33, was severely injured in a collision. Dyspnea out of proportion to his rib fractures was the outstanding clinical feature. An electrocardiogram done one week after injury showed the following picture. Convalescence was prolonged because of his markedly decreased cardiac reserve. Fluoroscopic examination of the heart three months post-trauma revealed an enlarged heart, and persistent ST segment elevation suggests the presence of a ventricular aneurysmal dilatation. (Figure 3.)

Summary

1. Cardiac injury occurs with pronounced frequency in automobile accidents, particularly the "steering wheel" type of injury.

2. Cardiac injury can occur with chest trauma, in the absence of rib fractures or penetrating chest wounds.

3. Routine electrocardiographic studies should be done on any patient who has received significant chest trauma.

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Rectal Diagnosis

THE IMPORTANCE OF BIOPSY STUDIES*

RUFUS C. ALLEY, M. D.

Lexington

The extreme importance of accurate diagnosis of diseases of the lower bowel cannot be over-emphasized. Accurate diagnosis in many cases, particularly those involving tumors, requires careful microscopic study of specimens of tissue removed for that purpose.

Tumors generally can be classified either as of inflammatory origin or as new growths. The new growths, or neoplastic tumors, may be either benign or malignant. It is the great responsibility of the physician to detect such tumors in the lower bowel, as well as elsewhere, at the earliest possible time so that the patient can have the benefit of early accurate diagnosis and immediate curative treatment.

Diagnostic Procedures

It is a fortunate coincidence that approximately three fourths of all malignant tumors of the intestinal tract (excluding the stomach) occur in the rectum and lower sigmoid colon, and that this portion of the lower bowel is easily accessible for direct examination through the sigmoidoscope. Indeed, at least one-half of all of these intestinal cancers can be detected by simple digital examination of

*Read before the Kentucky State Medical Association at the 1954 Annual Meeting, Louisville, September 21.

the rectum. It is also true that X-ray diagnosis in this terminal segment of the large bowel is far from satisfactory because the anatomic conformation in this area does not permit accurate observation of the X-ray shadow.

It is therefore highly important for the patient with symptoms referable to the lower bowel to have: first, a simple examination consisting of inspection and insertion of a well lubricated finger; second, a properly performed endoscopic examination of the rectum and lower sigmoid; and then, if indicated, an X-ray examination of the colon.

The first of these (inspection and digital examination) can and should be done by the family physician. The second part (endoscopic) can be done by any practitioner familiar with the use of the proctoscope and sigmoidoscope. Many physicians and surgeons today are qualified in this respect, and, of course, the use of these instruments constitutes an important part of the daily activity of the proctologist. X-ray examination of the colon should be undertaken only by those especially qualified in roentgen diagnosis.

A thorough and complete examination, step by step in the sequence mentioned (digital, endoscopic, X-ray), is today the only known method of detecting intestinal cancers in the early stages so that these patients can avail themselves of the golden opportunity for modern curative surgery.

Tumors of the Lower Bowel

All tumors of the lower bowel are not cancers. While the gross characteristics of some intestinal tumors may be virtually diagnostic, there are many instances in which biopsy studies must be made for accurate diagnosis. Polypoid tumors, frequently called adenomatous polyps, or just plain polyps, are usually benign at first, but with the passage of time they become larger and are apt to undergo cancerous change. These polyps, particularly the larger ones which are sessile or have short pedicles, should always be considered cancerous until proved otherwise. Other lesions may be easily confused with cancer. Among these are certain benign tumors and inflammatory indurations. Some granulomatous tumors, particularly those caused by the tubercle bacillus and by the endameba histolytica, may have all of the gross characteristics of cancer. The changes produced by the virus infection lymphopathia venereum (venereal lymphogranuloma) and by other lymphopathies may likewise be confusing. Biopsy specimens properly removed and carefully studied will lead to a specific diagnosis in a large proportion of such cases. The results of a biopsy examination should, however, be looked upon as only a part, even though an indispensable part, of the total examination.

Surgical procedures of considerable magnitude are often required for the removal of cancer of the lower bowel, and for that reason unquestioned positive diagnosis of cancer must be made, if it is at all feasible to do so, before subjecting any patient to such extensive surgery. Careful clinical examination supplemented by proper biopsy studies is the most nearly infallible method of tumor diagnosis available today.

Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

All scientific material appearing in the Journal is reviewed by the Board of Consultants on Scientific Articles. If illustrations are submitted with a paper, the Journal will assume the cost for the first three one-column width half tones. The cost of additional illustrations will be borne by the essayist.

Arrangements for reprints of an article should be made directly with the publisher of the Journal, Mr. J. G. Denhardt, Times-Journal Publishing Company, Bowling Green, Kentucky.

Please mail your scientific articles to the Journal of the Kentucky State Medical Association, 620 South Third Street, Louisville 2, Kentucky.

The Inter-Relationship Between the G. P. and the Surgeon*

C. WALKER AIR, M. D.

Ludlow

The inter-relationship between the G. P. and the surgeon is conceived in medical college. Its period of gestation coincides with the years of internship and residency. It is born the day the physician commences his practice.

From then on, its development depends on the innate characteristics of the individuals and the effects of environment. Like any other new born it may develop into a healthy mature entity and make a worthwhile contribution to the community. If it lacks a good background and receives poor nourishment and care it will be weak and ineffectual.

In actual practice this inter-relationship is usually initiated by the G. P. who refers a case to a surgeon for examination or treatment. The collaboration of a surgeon and medical practitioner is a matter of great importance to the patient. To us, however, it is a very common occurrence in which we participate almost automatically, and many of us may not be conscious of the numerous factors which determine our actions.

Selection of Consultant

There are three indisputable criteria for the selection of a surgeon.

The first of these is availability and needs no discussion except to point out that the inter-relationship does not have a very good chance of developing if the surgeon is too frequently unavailable.

The second is the ability of the surgeon. Just as the G. P. divides his referral cases among the various specialties so will he apportion his surgical work according to the abilities, aptitudes or preferences of the available surgeons.

The third criterion to be used is the desire of the patient. The patient should have as much freedom of choice of a surgeon as he has in the choice of his general practitioner. If the patient has no choice the G. P. must make the selection. If the patient selects a surgeon with whose qualifications the G. P. is unfamiliar, he should so inform the patient. If the G. P. believes that the suggested surgeon falls short of the standards of the surgeons in the community he had best withdraw from the case and let the patient go his way. If complete confidence and respect does not exist between the referring physician and the consultant something less than the optimum result will be obtained.

Many other less important and variable factors exert an influence on the association of G. P.'s and surgeons.

A young physician who starts a practice in the community in which he interned will be greatly influenced by the degree of interest shown him by the surgeons of the hospital staff. The surgeon who spends considerable time in teaching and discussing cases with the interns and residents is not only faithfully discharging his duty as a member of the staff but is also strengthening a friendly relationship, which may continue long after the interns or residents have entered the practice of medicine.

The personal characteristics of an individual, as in any walk of life, will strengthen or weaken the G. P.-surgeon relationship. In larger communities there is a sufficient number of both G.P.'s and surgeons so that persons with similar characteristics will eventually drift together. Where personalities clash and frequent contact is necessary because of circumstances, much forbearance is needed to be sure that the patient does not suffer because of failure of the G. P. and surgeon to cooperate.

Surgeons and G. P.'s from the same medical college may be drawn together because of the similarities in their training.

Social contacts may have some effect in initiating or strengthening the relationship between certain G. P.'s and surgeons. It is perfectly logical for persons who see each other frequently socially to think of each other professionally when the occasion arises.

As a corollary to the above factors, long association operates in favor of the older surgeon against the new comer in the community. No matter how excellent his ability or how charming his personality, the young surgeon will find that a G. P.-surgeon relationship of long standing will remain firm and will not be altered rapidly because of his advent into the community. Most of his early work will come from

*Read before the Southeastern Surgical Congress, September 22, 1954, during the Annual Meeting of the Kentucky State Medical Association, Louisville.

colleagues nearer his own age and referred cases from the longer established physicians will come more gradually.

Conduct of Consultations

The climax of the G.P.-surgeon relationship is manifested in the consultation. The patient's hopes and fears rest on the outcome of the consultation. While the surgeon may feel that his most important contribution is the operation itself, it is the consultation which is the essence of the inter-relationship, characterized by an exchange of ideas between the G. P. and surgeon which usually results in a mutual decision on a definite course of action. If a decision can not be reached, one or more other consultants should be called as indicated by the circumstances.

We are all familiar with the formal consultation. In recent years because of the hustle and bustle of our busy lives the consultation has become more informal and casual. There are many interesting and inspiring accounts of the formal consultation in literature such as that recounted in "A Doctor Of The Old School," which, as you know, was published as a part of "Beside The Bonnie Briar Bush" sometime in the 1890's.

In contrast to this I would like to quote a description of perhaps the most informal and unusual consultation ever held. It is from the "Medical Reports Of John Y. Bassett, M.D.," first published in "The Southern Medical Reports" in 1849-1850 and more recently published in book form by Charles C. Thomas, Springfield, Illinois.

"A political doctor was called from the stump to extract a bullet from the belly of a friend; after probing and searching for a time, a doctor differing in politics, not of great respectability in his profession, suggested to the surgeon to let the ball alone and attend to the general symptoms of his patient. A stormy consultation ensued. 'Stop,' said the first surgeon. 'I will state the case to the crowd and be governed by their instructions.' 'Cut it out,' said the crowd, but the poor man had himself 'cut out' before the doctor returned."[1]

There are certainly no consultations like this now—but the formal meeting of consultants at the bedside of the patient followed by a private discussion of the case, and then a joint pronouncement to the family is seen much less frequently than in former years.

In all but the most serious or baffling cases the method of consultation has generally resolved itself into one of the following:

In ambulatory cases the patient is usually sent to the office of the surgeon.

Most bed patients now referred for surgical consultation are either already in the hospital or sent to the hospital in anticipation of surgery. If the case is an emergency and the physician accompanies the patient to the hospital the more formal type of consultation may take place. Otherwise the surgeon may see the patient at his own convenience and report to the G. P. later, either orally or more often on the report form provided for that purpose.

In short, under present conditions, in communities with adequate hospital facilities and communication, much can be accomplished without the consulting physician and surgeon ever actually meeting at the bedside of the patient. Whatever the method, certain definite responsibilities are always present.

Responsibilities in Consultation

First, the G. P. should present the case to the surgeon early enough in its course so that the fullest benefit of surgery may be obtained. In cases in which the decision to operate is not clear cut, or in which the optimum time for operation is in doubt, the surgeon should certainly have an opportunity to share in making the decision.

Second, the G. P. should provide the surgeon with the necessary antecedent facts in the case. No matter how brief, these facts should include history, physical findings, diagnosis and treatment. He should also emphasize any other concurrent disease which may not be directly related to the condition for which the consultation is sought.

In return the surgeon should report to the G. P. his findings, diagnosis and recommendations for treatment. In many instances with clear cut diagnosis agreement will be the rule. If there is a difference of opinion the G. P. and surgeon should examine the patient together and if necessary enlist the aid of others to assist in arriving at a satisfactory decision.

Up to the time the surgeon first sees the patient the inter-relationship is rather one-sided, with the G. P. assuming the more active role. The consultation, no matter how conducted, is actually a joint effort, but if the decision is made to operate the surgeon becomes the principal party. If complicating or co-existent medical con-

(Continued on page 713)

CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

A Case of Hand Injury

Case No. 247000

Presentation of the Case

A 15-year-old white male entered the emergency room October 25, 1953, with a shot gun wound of the right hand, sustained accidentally while hunting. Many pellets, No. 5 size from a 16 gauge shotgun, had entered the hand from the palmar surface; the father had applied two tourniquets which had been on for two hours.

Examination showed a 15-year-old, small, pale, white boy with a blood pressure of 100/70 and pulse of 120. Bleeding, mostly dark red in color, ceased after removal of the homemade tourniquets. 1,000 cc. of 5% glucose was started intravenously; 15 minutes later his pulse was 100 and blood pressure was 140/80.

There were black gunpowder burns on the right palm and fingers. There was extensive tissue damage and loss of finger substance of the proximal half of the third and fourth fingers, and the web between them. (Fig. 1) The proximal phalanx of the middle finger was exposed and fractured, that of the ring finger extensively comminuted and partially gone. The wound extended into the palm as well as on the dorsal surface of the hand. He was unable to move the ring finger, but could partially flex and extend the middle finger. Motor function and sensation of the remainder of the hand were normal.

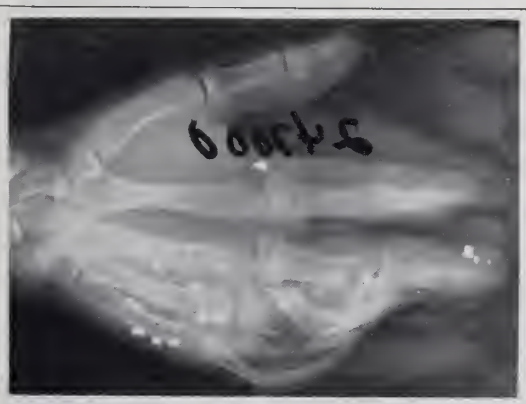

FIGURE 1

Right hand. There is a comminuted fracture with partial absence of the proximal phalanx of the 4th digit and a comminuted fracture of the proximal phalanx of the 3rd digit. There are several radio densities (gunshot) lying in the hand.

Management

The patient received 400,000 units of procaine penicillin and 3,000 units of tetanus antitoxin before operation, the operation being done under brachial block anesthesia.

A blood pressure cuff was applied to the arm, and after it was elevated for three minutes, the cuff was inflated to 280 mm. of mercury, clamped, and used as a tourniquet.

All hair was shaved from the hand and forearm. The finger nails were trimmed, cleaned and the extremity scrubbed with detergent soap and water. The wound was extensively irrigated with saline solution.

A sterile stockinette and drapes were arranged so that the hand and forearm could be moved about without contamination. In addition to the previously noted injuries, it was now apparent that the flexor and extensor tendons of the ring finger were completely divided and partially blown away. Therefore, this finger was amputated at the metacarpophalangeal joint, carefully preserving the intact skin with blood and nerve supply on the ulnar surface, but removing the cartilage from the fourth metacarpal head. Devitalized and extensively contaminated tissue was sharply excised.

Skin from the fourth digit was used to reconstruct the web and cover the large defect of the middle finger. The distal end of the partially avulsed nerve on the ulnar surface of the middle finger was anastomosed to the digital nerve, accompanying the skin flap taken from the ring finger, with two interrupted 6-0 silk sutures. Easily accessible shot were removed from the palmar and dorsal wounds. All wounds were again irrigated with saline. The blood pressure cuff was deflated. Bleeding points were clamped and ligated with 6-0 silk. Skin edges were approximated with interrupted 4-0 silk sutures. A dry sterile fluffed dressing with mild pressure

was applied. The wrist and middle finger were immobilized with an anterior plaster splint.

Postoperatively, the right extremity was elevated while the patient was in bed, and was placed in a sling when ambulatory. He received procaine penicillin, 400,000 units every 12 hours for four days and was discharged from the hospital on the sixth postoperative day.

On 17th post operative day the splint and all skin sutures were removed. Finger and hand exercises in warm soapy water were started two days later. His last clinic visit was on May 5, 1954, at which time he had normal flexion and extension of all digits of the hand and normal sensation in the middle finger.

Question: Do shotgun wounds differ from other gunshot wounds?

HAROLD E. KLEINERT, M. D. Yes. Particularly at short range the shotgun produces a wound in which much tissue is completely blown away and the remainder is badly damaged. In addition, foreign material such as clothing and wadding from the cartridge, may be carried into the wound. The wadding must be carefully removed, for it is a felt material composed of animal hair, often contaminated with tetanus spores, and thus is a frequent source of tetanus infection. (1) Accessible shot can be removed, but attempts to remove all will cause considerably more damage than the shot itself, which later becomes encapsulated by fibrous tissue.

In preparing all hand wounds, and in particular those from shotgun injury, it is important to irrigate copiously with saline to wash away contaminated material. All devitalized tissue must be carefully and sharply excised, without sacrificing any useful living tissue. In this case, it was apparent that the ring finger was beyond repair, while living skin on its ulnar side could be used to replace the web and skin of the middle finger.

Most large wounds require various types of pedicle grafts. One must first cover the defect with healthy skin and subcutaneous tissue before attempting the reconstruction of the injured bone, tendons and nerves.

Question: Where should a tourniquet be placed to control bleeding from a hand wound?

DR. KLEINERT: Tourniquets are rarely, if ever, necessary to control bleeding from hand injuries. Many times a tourniquet applied as a first aid measure produces more harm than good. In this case, the tourniquet did not completely obstruct arterial flow, but was tight enough to obstruct venous return. As a result, the patient lost an undue amount of blood. Since a clean pressure dressing applied directly to the wound will control most bleeding, the use of homemade tourniquets with their associated hazards is not recommended.

Question: Do you use a tourniquet during operations on hands?

DR. KLEINERT: Routinely—not a tourniquet but rather a blood pressure cuff. It is impossible to perform meticulous surgery, to avoid nerves, tendons and other delicate structures in a blood-obscured operative field. The blood pressure cuff is applied to the arm and after venous blood has been drained from the arm by elevation the cuff is inflated to 280-300 mm. of Hg.

We have seen paralysis result from a narrow pneumatic tourniquet; consequent-

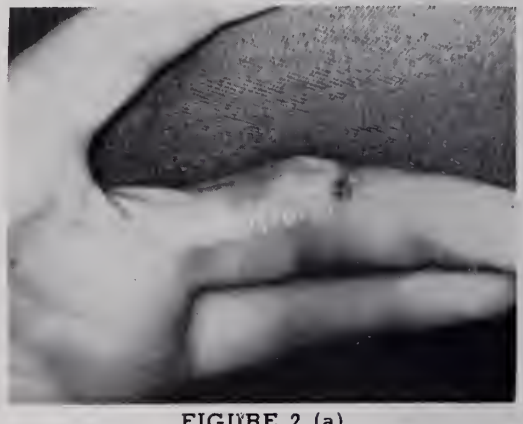

FIGURE 2 (a)

Anterior view (fingers abducted).

FIGURE 2 (b)

Posterior view (fingers abducted). Shows reconstructed web and healing wounds of middle finger of right hand.

ly, we prefer the much wider blood pressure cuff. The cuff must be deflated to make certain that adequate hemostasis has been obtained prior to closure of the wound. Hematoma in a hand delays healing, prevents early motion, and means increased fibrosis and a poor overall result.

Question: When a finger is amputated should the flexor and extensor tendons be fastened or sutured?

Dr. Kleinert: No. Tendons are drawn out, sharply divided, and allowed to retract to the mid-palm area where they are less likely to limit function by attachment to other structures.

Question: How long is immobilization necessary?

Dr. Kleinert: Since rest promotes healing immobilization is an absolute requirement, especially in tenorrhaphies. Generally speaking, tendons are immobilized in a position of relaxation for three weeks. The splint is then removed and light active exercise started.

Procedures on skin, such as grafts, or, as in this case, transfer of skin from one finger to another, usually require two to three weeks' immobilization for adequate healing and development of a new vascular supply.

Question: Why was brachial block anesthesia used?

Dr. Kleinert: Either brachial block or general anesthesia could have been used. Most important is that the anesthetic permit use of a tourniquet to obtain a bloodless field. Many patients admitted to General Hospital are in a drunken state, and are likely to vomit and aspirate during anesthetic induction. To minimize this we often use brachial block anesthesia. Local infiltration, however, should not be used.

Question: Is ACTH indicated in hand injuries?

Dr. Kleinert: ACTH is not indicated in cleanly incised wounds of the hand. There is some evidence that ACTH is of value in crushing injuries. It has been reported that pain is diminished, edema lessened, and motion restored sooner, and that little or no interference occurs in the rapidity of healing. (2) To date, our personal experience with ACTH in crush injuries of the hand is too limited to justify the formation of a definite opinion concerning its value.

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EDITORIALS

DIVERSIFICATION AT ITS BEST

Combining a three-pronged approach, the 1955 Committee on Scientific Assembly has put together what some observers feel is perhaps the strongest and most diversified scientific program for the 1955 Annual Meeting that has yet been offered to you, the members of K.S.M.A.

Closed circuit color television has been scheduled along with the conventional scientific presentations, and the highly popular afternoon of specialty group programs that was initiated at the 1954 Annual Meeting is included.

Eleven nationally known guest speakers, including the Editor of the Journal of the American Medical Association and an Admiral that is one of the top men in the U. S. Navy Medical Corps, will bring papers of broad interest and great profit to the general Scientific Assembly during the three-day session.

Nine specialty group organizations in Kentucky are offering a full afternoon of highly technical material on Thursday during the meeting. Members of K.S.M.A. may select such programs of interest and move from group to group as desired. Each one of the nine organizations has one nationally known essayist, several have two and one organization is presenting three outstanding guest speakers.

Eight hours of color television will be offered. Emanating from the Louisville General Hospital, these color-casts will be seen on a four-by-five foot screen in the Columbia Auditorium each morning starting at 8:30, and Tuesday and Wednesday afternoons, starting at 1:30.

The special color T-V programs subcommittee has scheduled a wide variety of subjects that will be intensely practical and profitable to the K.S.M.A. viewers and which will lend themselves beautifully to color-casting. All are urged to be on hand promptly at 8:30 a.m. and 1:30 p.m., when the broadcasts start.

The largest technical exhibit hall in K.S.M.A. history will display the latest in drugs, literature, equipment and service. Each tour you make through the hall will be a rewarding experience. Nowhere is so much practical information available for so small an effort on your part.

The annual K.S.M.A. scientific exhibits are growing in popularity and value to the members. Increasing interest has prompted more to apply for space, thus giving the Committee on Scientific Exhibits a broader selection of material. You will not want to miss this valuable feature.

The long tedious hours the K.S.M.A. Committee on Scientific Assembly has expended on this program together with the splendid work done by supporting groups, have resulted in a program for you that commands your greatest respect and support. All of this is a shining example of the profit that can be derived from seasoned leadership, unselfish teamwork and effective effort.

IS INDIGENT CARE THE RESPONSIBILITY OF A FEW OR OF ALL?

Kentucky has long accepted the principle, in law, that it is the responsibility of the local communities to provide medical care, as well as other necessities to the indigent. Statutes and court interpretations have clearly placed this responsibility on the county courts and municipal governments.

This approach to the problem of indigent medical care is basically sound in principle. It recognized that a civilized society has a responsibility to care for the poor, both well and sick. It assumes rightly that the ideal way to solve the problems created by the need for such care is at the local level. It recognizes that the only equitable method of distributing the financial burden is through provision of such care by governmental agencies which draw their support from all the people.

The study of indigent medical care in Kentucky recently completed by the K.S.M.A. Committee on Medical Service was undertaken to see how well the job is

Opinions expressed in contributions to this Journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

currently being done in the light of these accepted principles. The recommendations of the committee following two years spent in gathering and evaluating data from numerous sources in no way conflict with, but rather are intended to strengthen, the actual operation of what is now, in fact, an established part of Kentucky law.

The survey concerned itself primarily with answering the question: "Who is now bearing the burden of Kentucky's indigent medical care?" In twelve counties, which were selected by James W. Martin, Ph.D., director of the University of Kentucky Bureau of Business Research, as offering a representative cross section of the state, the evidence clearly showed that a high percentage of Kentucky counties are failing to meet their legal obligation with respect to care of the sick poor. A similar picture was shown by reports from the other counties in the commonwealth.

At present indications are that physicians and general hospitals are providing approximately eight times as much charity service to the indigent as is being paid for by the 119 counties exclusive of Jefferson. Similar large contributions are undoubtedly made by dentists and pharmacists.

Forty-seven counties spent less than two cents per capita in 1953, test year, for all indigent medical care, including medical and dental care, drugs and appliances, ambulance service and hospitalization. It is extremely doubtful that any of these counties have so small an indigent sick problem. It is obvious that they are simply failing to meet the need.

Your K.S.M.A. Committee on Medical Service has tried to make it plain that its recommendation for state medical care funds to be matched by the counties on a sliding scale with maximum control at the local level, is not for the personal benefit of the state's doctors of medicine. It has insisted that it is wrong in principle for physicians, dentists, pharmacists and other professional people to be expected to provide such care without payment, but it has reaffirmed the obvious willingness of the professions to do so as long as necessity requires.

Priority of funds for indigent hospitalization has been emphasized, because the present system, in which paying hospital patients ultimately assume the burden for the indigent in most hospitals, places an unfair tax on these people. Often they are least able to carry the extra burden. This inequity needs to be met first.

It is obvious, also, that the failure of many counties to provide indigent medical care is directly due to their lack of funds. If the accepted principle of indigent care is to be properly implemented, additional money must come from somewhere. The avenue which will best permit retention of local control is state funds. Local participation will still be a matter of choice. Adoption of your committee's recommendations, however, will make conformity with the state's present laws a probability in all counties instead of the present grim impossibility in many.

GAITHEL SIMPSON, M. D., Chairman
K.S.M.A. Committee on Medical Service

EIGHT UNNECESSARY DEATHS

Within the past nine months eight deaths which could have been prevented have occurred in Meade County from diphtheria. This in the year 1955 and in a population of slightly over 10,000!

A breakdown of the population of Meade County reveals a school population of 2,530 and an estimated pre-school population of 1,700. This means that approximately one-half Meade County's population are in the presumably susceptible age groups.

While diphtheria appears to have struck Meade County in two separate outbreaks —the first during September, October, and November of 1954 and the present one in March, 1955; nevertheless there is every reason to believe that a sufficient number of unrecognized cases occurred during the intervening months to keep the disease smouldering.

During the period, September through May, there were 42 reported cases of diphtheria with a case fatality rate of 19 per cent. The causative organism is of the gravis type and adults, as well as children, have been attacked.

No adequate prediction can be offered regarding the outlook for additional cases occurring in Meade or in any other counties as the level of immunity is not known. Immunizations given by county health departments are a matter of public record.

(Continued on page 716)

ORGANIZATION SECTION

AMA House Actions Follow Warm Debates at Atlantic City

The House of Delegates of the American Medical Association in session at Atlantic City during its Annual Meeting in June saw some warm debates and took many important actions. The following is a summary of some of the more important bits of legislation.

After considerable debate the House changed Chapter 1 of the Principles of Ethics to read as follows: "It is not unethical for a physician to prescribe or supply drugs, remedies or appliances as long as there is no exploitation of the patient."

Next, thought was given to the osteopathic problem. Following a long debate, the minority reference committee report was accepted by a margin of only 22 votes. The minority report called for no action at this time.

The controversial report on medical practices was debated and action deferred until the winter meeting in Boston this December. Copies of this report are being sent to the officers and councilors of K.S.M.A., and others will be available in the Headquarters Office for the asking.

Arkansas, Pennsylvania and West Virginia brought in resolutions protesting the U.M.W.A. directive requiring general practitioners to get a specialty consultation before admitting beneficiaries of the Welfare Fund to hospitals. The House of Delegates adopted a substitute resolution prepared by the reference committee which sustained the general practitioner in this matter.

There were six resolutions reflecting widespread dissatisfaction with the present hospital accreditation program. The reference committee recommendation that the Speaker of the House be requested to appoint a special committee to review the function of the Joint Committee, to consist of seven members, none of whom will be members of the Council on Medication and Hospitals, or the Joint Commission, was accepted.

The House of Delegates stated that it was unethical for doctors of medicine to teach in schools of optometry. It also warned against legislative proposals that were designed to restrict the entire field of visual care to the profession of optometry. The House voted to ask Congress to defeat the Doctor Draft Act.

Pike County Will Be Host to 14th District, Sept. 22

The Fourteenth Councilor District will hold its annual meeting at the Green Meadow Country Club, Pikeville, John G. Archer, M.D., Prestonsburg, councilor for the district said.

Features of the session will be an address by K.S.M.A. President Clyde C. Sparks, M.D., Ashland, and an afternoon and evening scientific program.

The Pike County Medical Society will be host to the meeting, and the program is being arranged by Eugene Combs, M.D., Pikeville, Dr. Archer said. Details on the meeting will go to the individual members of the district later this month, Dr. Archer state.

Dr. Alley Chosen Pres.-Elect of American Proctologic Society

Rufus C. Alley, M.D., Lexington, was chosen president-elect of the American Proctologic Society at the Society's meeting in New York, June 1.

Stuart T. Ross, M.D., Hemstead, New York, is president. Dr. Alley will be inducted as president of the society at its annual meeting in June 1956, when the delegates from the 500-member society meet in Detroit.

Dr. Alley has been treasurer and a member of the Executive Committee since 1949.

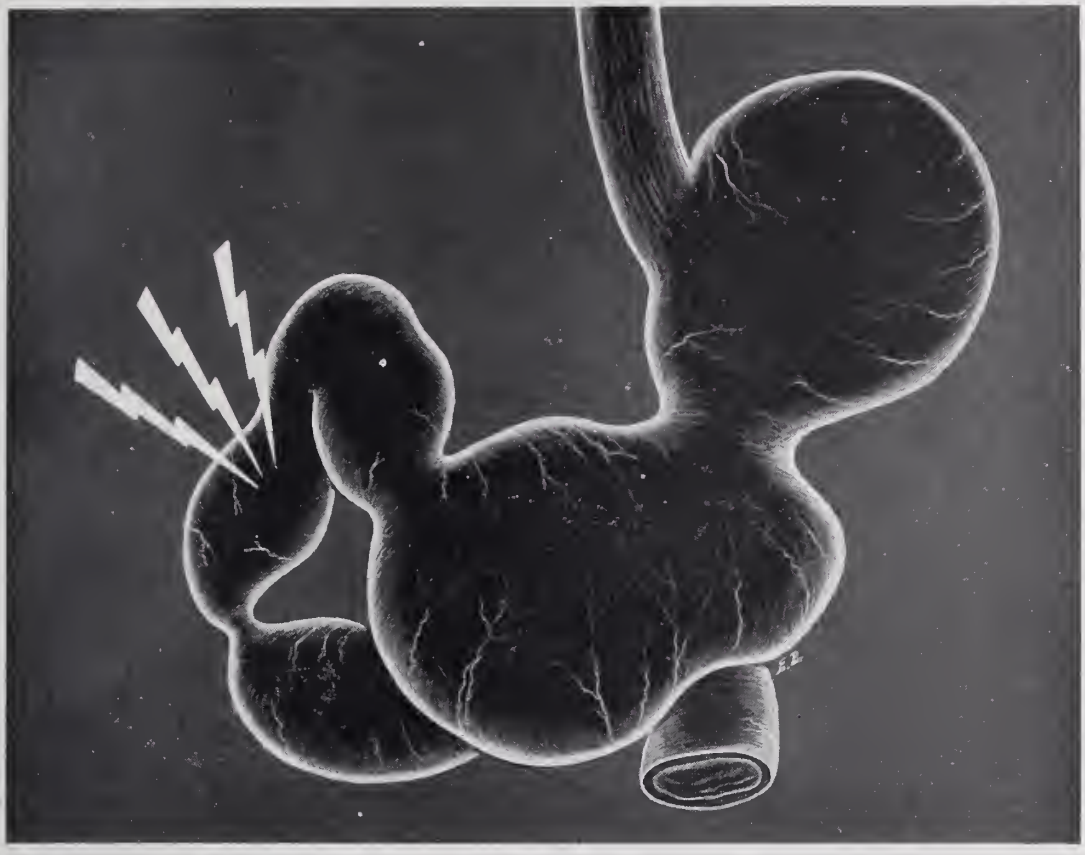
Kentucky Orthopedists Meet in Lexington, May 26

Arrangements for the annual meeting in September of the Kentucky Orthopedic Society were discussed at its semi-annual meeting, May 26, at the Cardinal Hill Hospital in Lexington, according to Kenton D. Leatherman, M.D., Louisville, president of the Society.

The scientific program was presented by physicians from the Lexington group, Dr. Leatherman said, and was in the nature of a forum.

Other officers of the Society are, Marion G. Brown, M.D., Lexington, vice-president, and James M. Riley, Jr., M.D., Louisville, secretary and treasurer.

PRO-BANTHĪNE FOR ANTICHOLINERGIC ACTION



Abnormal Motility as the Cause of Ulcer Pain

Until recently the general opinion was held that ulcer pain was primarily caused by the presence of hydrochloric acid on the surface of the ulcer.

Present investigations[1,2] on the relationship of acidity and muscular activity to ulcer pain have led to the following concept of its etiologic factor:

". . . abnormal motility[2] is the fundamental mechanism through which ulcer pain is produced. For the production and perception of ulcer pain there must be, one, a stimulus, HCl or others less well understood; two, an intact motor nerve supply to the stomach and duodenum; three, altered gastro-duodenal motility; and four, an intact sensory pathway to the cerebral cortex."

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1. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

2. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

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Sixth District Holds Meeting at Russellville, July 12

The annual summer meeting of the Sixth Councilor District was held in Russellville at the Country Club, Tuesday, July 12.

G. Y. Graves, M.D., Bowling Green, talked on "Pancreatitis," and C. C. Howard, M.D., Glasgow, spoke on "Abnormal Uterine Bleeding."

The host group for the eleven-county district was the Logan County Medical Society, according to L. O. Toomey, M.D., Bowling Green, Councilor.

Dr. Sparks Addresses 4th District on Changing Trends, June 23

"Changing Trends in Medicine" was discussed by Clyde C. Sparks, M.D., Ashland, president of K.S.M.A., at the annual Fourth Councilor District Meeting at My Old Kentucky Home Country Club at Bardstown, Thursday, June 23.

Keith Crume, M.D., Bardstown, Councilor for the district, said 54 members and their wives attended the meeting, to which the Nelson County Society served as hosts.

The scientific program was presented by Condict Moore, M.D., and Douglas Atherton, M.D., both of Louisville. Speaker guests at the meeting were President-elect J. Gant Gaither, M.D., and Third District Councilor Delmas Clardy, M.D., both of Hopkinsville.

Twelfth and Fifteenth Districts Hear Dr. Sparks, June 16

Clyde C. Sparks, M.D., Ashland, K.S.M.A. president, was the featured speaker at a joint meeting of the Twelfth and Fifteenth Councilor Districts attended by 84 physicians and their wives at DuPont Lodge, Cumberland Falls, on June 16.

The afternoon scientific program was presented by Walter S. Coe, M.D., John Harter, M.D., and Robert McClendon, M.D., all faculty members of the University of Louisville School of Medicine.

Sharing the spotlight on the after dinner session with Dr. Sparks was Thomas L. Lomasney, M.D., Knoxville, Tennessee.

Garnett Sweeney, M.D., Liberty, Councilor for the Twelfth District, and Charles Stacy, M.D., Pineville, Councilor for the Fifteenth District, expressed themselves as being highly pleased with the presentations and the attendance.

Dr. Winter Re-Appointed Chairman Medical School Committee

Karl D. Winter, M.D., Louisville, has been re-appointed as chairman of the K.S.M.A. Medical School Advisory Committee for a three-year term.

Also appointed for like terms were C. C. Howard, M.D., Glasgow, and Thomas O. Meredith, M.D., Harrodsburg. The three appointments were made by K.S.M.A. President Clyde C. Sparks, M.D., Ashland.

Other members of the nine-man committee are: Robert O. Joplin, M.D., Louisville, J. Vernon Pace, M.D., Paducah, G. L. Simpson, M.D., Greenville, Clark Bailey, M.D., Harlan, J. T. Gilbert, Jr., Bowling Green, and W. Vinson Pierce, M.D., Covington.

Dr. DeTar Addresses GP's

John S. DeTar, M.D., Milan, Michigan, president-elect of the American Academy of General Practice, addressed the Kentucky and Tennessee Academies of General Practice at the 2nd annual Kenlake Seminar on the subject "The AAGP in American Medicine Today." The seminar was held at Kentucky Lake State Park on July 14.

Marion F. Beard, M.D., Louisville, presented a paper entitled "Office Hematology." Elkin Rippey, M.D., Nashville, Eugene H. Countiss, M.D., New Orleans, and William G. Leaman, Jr., M.D., Philadelphia, also appeared on the scientific program.

Manual for Medical Assistants to Be Published First of Year

"The Office Assistant in Medical and Dental Practice" is the title of a new 500-page textbook or training manual for women employees of physicians and dentists now being published by the W. B. Saunders Company.

"The K.S.M.A. Education Campaign Committee is indeed glad to hear of this publication and recommends it for consideration by our members when it makes its appearance the first of the year," said W. Vinson Pierce, M.D., Covington, chairman of the Education Committee.

Dr. Pierce stated that his committee for several years has been attempting to meet this need through the offering of a three-lecture

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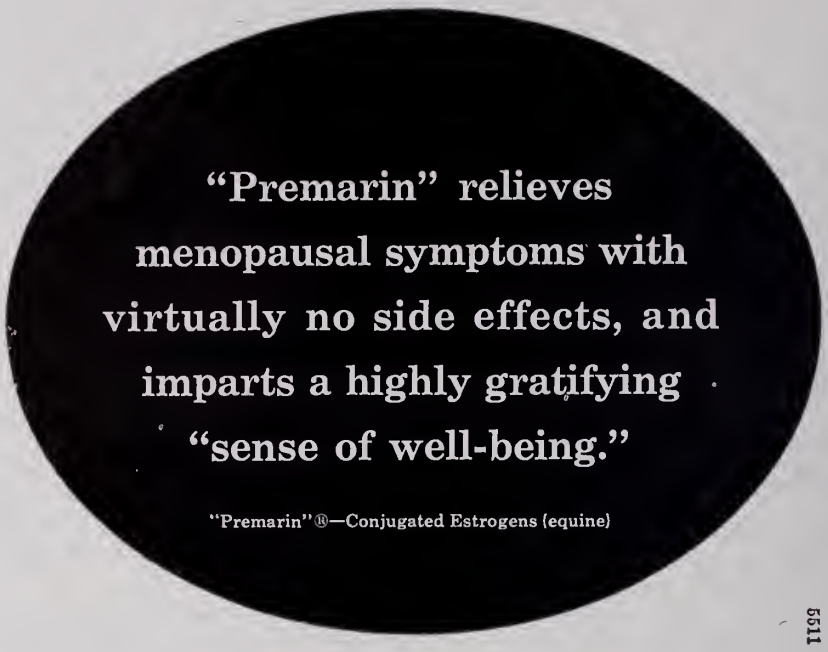

course in public relations for physician's secretaries and office assistants. A sizeable number of county societies have availed themselves of this service, and the headquarters office will be in position to book more counties for this course later in the year.

Trover Clinic Adds New Wing

Completion of a new wing onto the Trover Clinic at Madisonville will now bring the number of rooms the clinic is using to 60. Loman Trover, M.D., Madisonville, who made the announcement, said that three new physicians had been added to the staff of the clinic.

Dr. Collins Receives Plaque

R. L. Collins, M.D., Hazard, was presented a community service plaque by the citizens of Perry County, given to him in appreciation of 38 years of service to the community and to the Frontier Nursing Service, on May 26. Mrs. Mary Breckenridge, Wendover, founder and director of the Frontier Nursing Service, made the presentation, following a resume of Dr. Collins' life.

Dr. Collins was graduated in 1907 from the University of Louisville School of Medicine. After specialized training in surgery in 1916 he settled in Hazard in 1917, opening the first hospital there in association with the late A. M. Gross, M.D. He has been active in the Perry County Health Department and in civic and community activities.

Dr. Andrus Addresses Heart Ass'n.

E. Cowles Andrus, M.D., Baltimore, president of the American Heart Association, delivered the principal address at the luncheon session of the Kentucky Heart Association's Annual Meeting in Louisville on June 23 at the Brown Hotel. Dr. Andrus, who is associate professor of medicine at Johns Hopkins University, had as his subject "Research Frontiers in Cardiovascular Disease."

Correction

The staff of the Journal of K.S.M.A. regrets that a news item in the June 1955 issue erroneously stated that Bernard I. Popham, M. D., would open an office in Louisville in June, following his discharge from the Navy. Dr. Popham began a residency in internal medicine at the Veterans Administration Hospital in Louisville in July.

Dr. Meadows Honored in Greenup

Matthew W. Meadows, M.D., Fullerton, was honored by the residents of Greenup County on June 2, for 51 years of medical service, with a parade, reception and banquet.

The 87 year old physician went into semi-retirement three years ago, but after spending one winter in Florida he returned to Fullerton to resume his medical practice. Dr. Meadows has been active in the community for the entire period of his life, and has been especially interested in the building of good roads.

Cuban Group Honors Mr. Loranz

Mr. C. P. Loranz, advisor and professional relations counselor of the Southern Medical Association (and for nearly 40 years its secretary and general manager) was honored in Havana, Cuba, March 15, by the Cuban Red Cross for his work of 25 years in establishing better professional relations between physicians of the Southern United States and Cuba. Mr. Loranz was the recipient of a scroll conferring the rank of Commander (Exalted Knight) in the high Order of Honor and Merit of the Cuban Red Cross.

New Shriners Hospital Dedicated

The new Shriners Hospital for Crippled Children at Lexington was dedicated on May 29 in a ceremony attended by 3000 persons. Patients had been removed from the old hospital on Maxwell Street to the new building on Richmond Road last April 11.

The hospital is a self-contained unit, with a well-equipped operating room, x-ray room, laboratories, physical and occupational therapy rooms, brace shop, school rooms, laundry and kitchen and dining rooms. It is a Colonial-type brick structure of one-floor design, except for the second-floor nurses' quarters above the front center wing.

Students to Aid in Public Health

Thirty-four medical students began work with 74 county health departments in Kentucky on June 15, and will spend three months in areas where physicians distribution is poorest.

L. R. Mezera, M.D., Louisville, director of the Division of Maternal and Child Health of the State Department of Health, stated that the students, all but one of whom are graduates of the University of Louisville School of

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Omission

The June issue of the Journal inadvertently omitted a footnote to the Special Article entitled "A Physician Looks at the Hour Glass." This paper was presented at the National Rural Health Conference in Milwaukee by Wyatt Norvell, M.D., New Castle, chairman of the K.S.M.A. Rural Health Committee.

Pediatric Cancer Clinic Opened

The Kentucky Division of the American Cancer Society, in cooperation with the University of Louisville School of Medicine and the Louisville Children's Hospital, has recently established a Pediatric Cancer Clinic in Louisville, according to James C. Drye, M.D., Louisville, director of the Cancer Clinics of the Kentucky Division.

Arrangements for admitting patients are to be made with Israel Diamond, M.D., the director of the new clinic. It meets each week on Tuesday between 1:00 and 4:00 p. m. at the Children's Hospital in Louisville, and will draw patients from all over the state.

Dr. Woodson to Serve 4th Term

T. Ashley Woodson, M.D., Louisville, was re-elected Governor of the American College of Chest Physicians for Kentucky at the annual meeting of the College in Atlantic City, June 2-5. Dr. Woodson will serve his fourth consecutive three-year term as Governor for Kentucky. Lawrence Taugher, M.D., Louisville, is president of the Kentucky Chapter, which is participating in the 1955 K.S.M.A. Annual Meeting.

Dr. Fox Appointed to State Post

Walter Fox, M.D., Louisville, who has been resident psychiatrist at Norton Memorial Infirmary for two years, has been appointed clinical director of Central State Hospital, succeeding Anthony Coletti, M.D., who became clinical director of the Yankin South Dakota State Hospital.

Dr. Fox, a native of Winnipeg, Canada, graduated from the Manitoba Medical College in Canada. He has been a consultant to the Kentucky Department of Mental Health for the past six months.

THE INTER-RELATIONSHIP

(Continued from page 700)

ditions are present, close team work is necessary.

Operative and Post-Operative Responsibility

The degree to which the G. P. participates in the operation and post operative care depends to a large extent upon the surgeon. Prevailing local custom may guide the surgeon in his decision regarding this matter, but he will let the welfare of the patient be the ultimate criterion.

Many busy G. P.'s do not have time to administer anesthetics or assist at operations. Others prefer to participate in the operation in one of these capacities. A fixed rule cannot be set to establish a course of action which will be applicable to all surgeons or all G. P.'s. The G. P. who wishes to participate as anesthetist or assistant should prepare himself by study to become as efficient as possible. Obviously this cannot be done without the cooperation of the surgeons with whom he expects to work. In areas where there are too few full time anesthesiologists much of the excess work can be carried by G. P.'s who have a special interest in anesthesia. Likewise a G. P. with an interest in surgery may become a valuable assistant if he becomes familiar with the technique of the surgeon whom he assists.

Post operative care is the responsibility of the surgeon. There are, I presume, circumstances in smaller communities where the surgeon may come from another city and return to his home after the operation, leaving the after care to the local physician. In this event there must be a detailed exchange of ideas so that each knows what to expect of the other, and the surgeon should be ready to return whenever the local physician suspects or believes that a post operative emergency exists. If the surgeon finds it necessary to be completely out of contact with a post-operative case and leaves it in care of a G. P., he should designate one of his surgical colleagues who can be called in an emergency.

I do not believe it is necessary for the G. P. to make regular daily post-operative visits to his patient unless a co-existent medical condition is present. The surgeon is capable of recognizing a medical complication if it arises and he can then notify the G. P. to assume responsibility for its treatment.

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Short, informal, friendly visits by the G. P.—without charge— do a lot to build good-will, and the patient will not feel that he has been "shoved off" on another doctor. Conversely, daily unnecessary visits for which the patient is charged cause the patient to become disgruntled and reflect discredit not only on the individual physician but on the profession as a whole.

Final Responsibility of Surgeon

The final responsibility of the surgeon is an account of what was done at the operation. He should give a detailed report both to the referring physician and to the patient or a member of his family. An excited husband may not remember from an oral account all of the organs that were removed. A nervous or timid patient may not fully understand the information given at the final visit, yet hesitate to ask for further explanation. The patient may move to another locality and, if a woman, never be quite sure whether her right or left ovary was removed or whether an incidental appendectomy was performed. This is important to the physician who may subsequently see this patient with abdominal pain.

There are two subjects which have been discussed frequently in both lay and medical publications which, as far as I am concerned, need no discussion here, but should be mentioned only for the sake of completeness and to be condemned.

Fee splitting is a sharp practice which sooner or later will lead to the subordination of the patient's welfare to the acquisition of a fee.

Ghost surgery I can't comprehend at all. Aside from the shady financial deal involved, the dishonesty of the whole scheme is inexcusable.

Group Relationships

We have dealt with the inter-relationship between the individual G. P. and surgeon. It remains now to discuss briefly this inter-relationship as it pertains to groups.

Hospital staff sections in general medicine and surgery can do much to enhance the rapport between these two groups by sincere discussion of the differences which may arise. Any blanket decision which refuses all surgical privileges to all G. P.'s is just as bad as one which grants all surgical privileges to all G. P.'s. If any general

rule applies it would be this: The amount of surgery expected to be performed by the G. P. in a given community varies inversely as the number of qualified surgeons in that community. Where there is a shortage of surgeons in a community it may be a distinct advantage to have one or more G. P.'s capable of performing some of the minor and less formidable major surgical procedures, thus saving the energies of the specialist for the more difficult cases. Under circumstances such as this the specialist must not only be friendly toward the part time surgeon but must be willing to assist him in those cases which may become more difficult than anticipated. The G. P.'s responsibility is to not exceed the limits of his ability.

I am aware of the fact that all may not agree with me regarding some of the aspects of the G. P.-surgeon inter-relationship. Organizations such as the Southwestern Surgical Congress and The Academy of General Practice could mutually benefit by further consideration of some of these problems in joint committee meetings where all debatable phases of the relationship could be explored in detail and differences of opinion aired and evaluated.

Human nature being what it is, there will be times when our relationship will be beset by other difficulties, not incidental to diagnosis or treatment, but arising from some human foible to which we are at times prone to succumb. For those of us who may at such times need a guide for behavior I suggest three references: the Golden Rule, The Oath of Hippocrates and the Code of Ethics of the American Medical Association.

REFERENCES

1. "The Medical Reports of John Y. Bassett, M. D., the Alabama Student" with Introduction by Daniel C. Elkin, M. D., Emory University, Charles C. Thomas, Publishers, Springfield, Ill., 1941.

The Seventh Annual Postgraduate Assembly of the Endocrine Society in cooperation with the Indiana School of Medicine is being held in Indianapolis, September 26 to October 1, according to an announcement from the Medical Center News Bureau of Indiana University. The course is designed to cover the main aspects of diagnosis and therapy in the field of endocrinology and metabolism for the physician in general practice and those in other specialties. For further information, address: Postgraduate Office, Indiana University Medical Center, 1100 West Michigan Street, Indianapolis.

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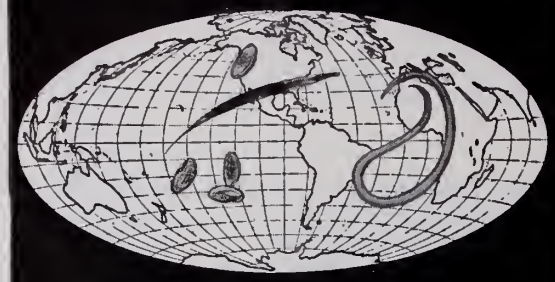

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EIGHT UNNECESSARY DEATHS

(Continued from page 705)

Some physicians have added to this record by providing health departments with information regarding the number of immunizations given in their offices, but the information furnished is too scattered. If this information was furnished statewide, the extent of any outbreak could be reasonably well predicted.

What has occurred in Meade County could happen quite readily elsewhere unless the level of immunity is built up in the age group from birth through 18 years. Through educational campaigns, health departments raise this level by pointing out the need for immunizations and urging parents to take their children to private physicians. In some instances, working with private physicians, health departments sponsor mass immunization clinics. The level of immunity is dependent upon the interest of the parents, the activity of the health departments, and the cooperation of the private physician.

EDWIN CAMERON, M. D., Director,
Division of Preventive Medicine
Kentucky State Department of Health

News Items

The Memorial Hospital Association has announced the appointment of **Mr. Joseph J. Doney** as administrator of the Whitesburg Memorial Hospital at Whitesburg. Mr. Doney joined the staff of the Memorial Hospital Association in June 1954. He received his graduate degree in hospital administration from the University of Toronto.

Joseph E. Lane, M.D., who limits his practice to the specialty of proctology, has recently become associated with **Rufus C. Alley, M.D.,** Lexington. A native of Lafayette, Indiana, Dr. Lane received his academic training at Center College and his medical degree from the University of Louisville School of Medicine. He completed his residency training at St. Joseph Hospital in Lexington. Dr. Lane served in the U. S. Army during World War II.

Merrill Schell, M.D., who resided in Bowling Green before taking his medical training at Vanderbilt University, has recently opened an office in Owensboro. He has been in Nashville, Tennessee, since 1946, except for two years spent in military service. He has recently been assistant chief of surgical service at the Veterans Hospital in Nashville.

William Ackerly, M.D., Louisville, has been appointed a teaching fellow in psychiatry at the Harvard Medical School, Boston. He will do graduate and research in addition to teaching. Dr. Ackerly attended the University of Louisville School of Medicine two years and was graduated from the University of Pennsylvania Medical School in 1954.

Samuel C. Capps, M.D., Lexington, has resigned from his position as pathologist at the Lexington Clinic to accept a position in Grand Rapids, Michigan. Dr. Capps served as a pathologist at the Good Samaritan Hospital in Lexington prior to his work with the Clinic.

IN THE BOOKS

(Continued from page 646)

rest group, and it was concluded "that enforced bed rest has no advantage over ad lib rest in the treatment of the acute disease." The casual reader may interpret this conclusion as meaning that patients with acute viral hepatitis may be permitted out of bed early in the course of the illness and may be permitted to carry out "ad lib activity" without ill-effect or even with beneficial effect. The fallacy with this interpretation is that "ad lib rest" does not imply also "ad lib activity."

These volumes are a source of reliable information written by a faculty which was selected from individuals "who were there."

Arthur M. Schoen, M. D.

Pertinent Paragraphs

"Danger at the Source" is the title of a documentary film telling the story of medical education in America. This black and white, 16 mm. sound film, produced by Fox Movietone as a public service, is suitable for lay and professional audiences. A descriptive flyer may be secured from "Film", National Fund for Medical Education, 2 West 46th Street, New York.

Russell L. Cecil, M.D., medical director of the Arthritis and Rheumatism Foundation, has announced three classes of fellowships for basic research in arthritis. Predoctoral and postdoctoral fellowships tenable for one year, and senior fellowships for more experienced investigators, tenable for five years, should be applied for by October 15, 1955. For further information and application forms address Medical Director, The Arthritis and Rheumatism Foundation, 23 West 45th Street, New York.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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MONDAY MORNING

Registration - 7:30 - 9:00 a. m.

Philip Thorek, M.D., Chicago, Illinois—"Intestinal Obstruction"

Edgar Hull, M.D., New Orleans, La.—"Emergency Use of Corticoids and Corticotropins"

George Pack, M.D., New York, N. Y.—"Carcinoma of the Breast"

Robert B. Greenblatt, M.D., Augusta, Ga.—"Use and Abuse of Endocrines in General Practice"

Arthur Curtis, M.D., Ann Arbor, Mich.—"Cutaneous Manifestations of Systemic Disease"

Lunch: 12:00 noon - 2:00 p. m.

MONDAY AFTERNOON

Brian Blades, M.D., Washington, D. C.—"Traumatic Injuries of the Chest"

Harry Bacon, M.D., Philadelphia, Pa.—"Anal and Rectal Lesions and their Treatment"

Philip Thorek, M.D., Chicago, Illinois—"The Peptic Ulcer Problem"

Waldo E. Nelson, M.D., Philadelphia, Pa.—"Pediatric Care by the General Practitioner"

QUESTION AND ANSWER PERIOD—Dr. Harry Bacon, Moderator

COCKTAIL HOUR: 5:30 - 6:30 p. m.

BANQUET: 7:00 p. m.—Speaker, John C. Krantz, Jr., Professor of Pharmacology, University of Maryland, "The Simplicity to Wonder." Honor Guest, Dr. Elmer Hess, Erie, Pa., President of American Medical Association.

TUESDAY MORNING

Alton Ochsner, M.D., New Orleans, La.—"Cancer of the Lung"

Thomas J. Dry, M.D., Rochester, Minn.—"Coronary Artery Disease"

Nicholas J. Eastman, M.D., Baltimore, Md.—"Complications of Pregnancy"

Elmer Hess, M.D., Erie, Pa.—"Management of Ureteral Calculi"

Edgar Hull, M.D., New Orleans, La.—"Manifestations and Treatment of Extra-intestinal Amebiasis"

LUNCH: 12:00 noon - 2:00 p. m.

TUESDAY AFTERNOON

J. Spencer Speed, M.D., Memphis, Tenn.—"Diagnosis and Treatment of Backache"

Sara Jordan, M.D., Boston, Mass.—"The Irritable Colon"

Charles A. Doan, M.D., Columbus, Ohio—"The Diagnosis and Treatment of Acute Leukemic States"

Alexander Brunschwig, M.D., New York, N.Y.—"Carcinoma of the Cervix"

QUESTION AND ANSWER PERIOD—Dr. Alton Ochsner, Moderator

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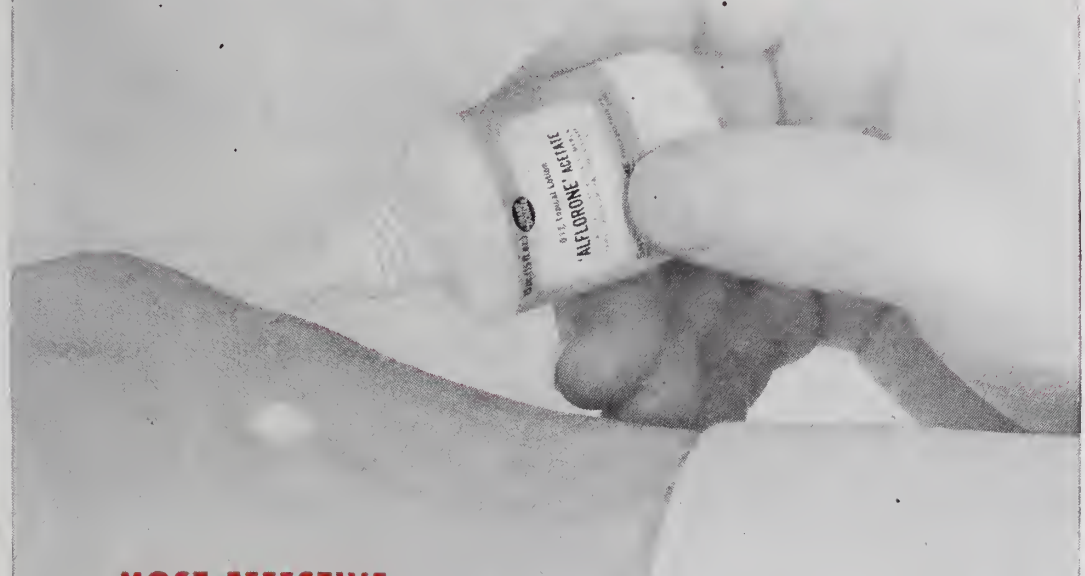

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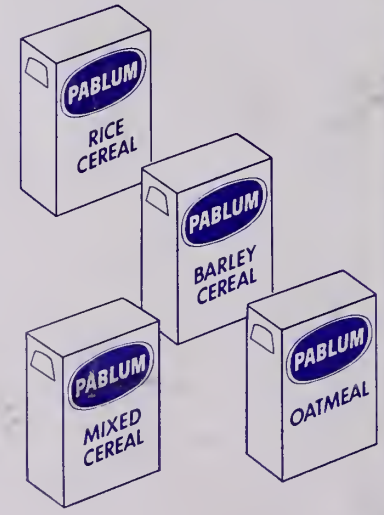

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The Journal
OF THE KENTUCKY STATE MEDICAL ASSOCIATION

VOL. 53 SEPTEMBER, 1955 NO. 9

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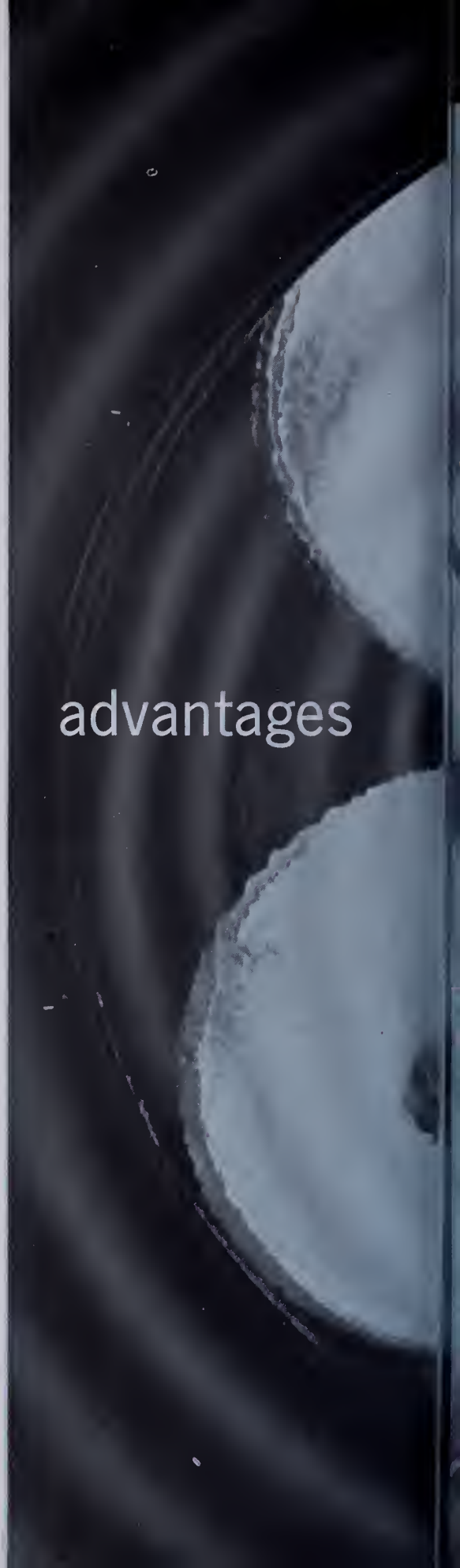

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1. Pomeranze, J. et al.: Angiology, June, 1955.
2. Freedman, L.: Angiology 6:52, Feb. 1955.

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President's Page

Your President is meeting with you for the last time in the current administration through the medium of the Journal. He wishes to express appreciation to the loyal membership throughout our state. The three vice-presidents who have visited you through this page join in this expression.

We have talked with you about many things during the past year and hope to talk with you again about these matters and others during the state meeting. However, we have not yet talked with you concerning the work of your Council. Purposely, this has been saved until the last, since often last words are those best remembered.

Your Council carries the responsibility of making major decisions throughout the entire year with the exception of about four days. Their work is carefully and conscientiously carried out. The Executive Committee of your Council disposes of a number of non-controversial details, but all problems of much weight are studied by the full Council before being passed on to you for consideration. It has been a pleasure to work with the Council this past year. The capable leadership of its present chairman has stimulated the Council and aided them in doing a most sincere piece of work.

It is the earnest desire of your Council that each area bring its problems and successes to its attention through the District Councilor. This, your Council believes, will produce a finer and more influential Kentucky State Medical Association.

As a closing message on this page, I ask you to give your new president, J. Gant Gaither, M.D., and the new Council the same fine cooperation given me during the past year. Serving you as your president has been the greatest pleasure of my medical life.

L. C. Sparks

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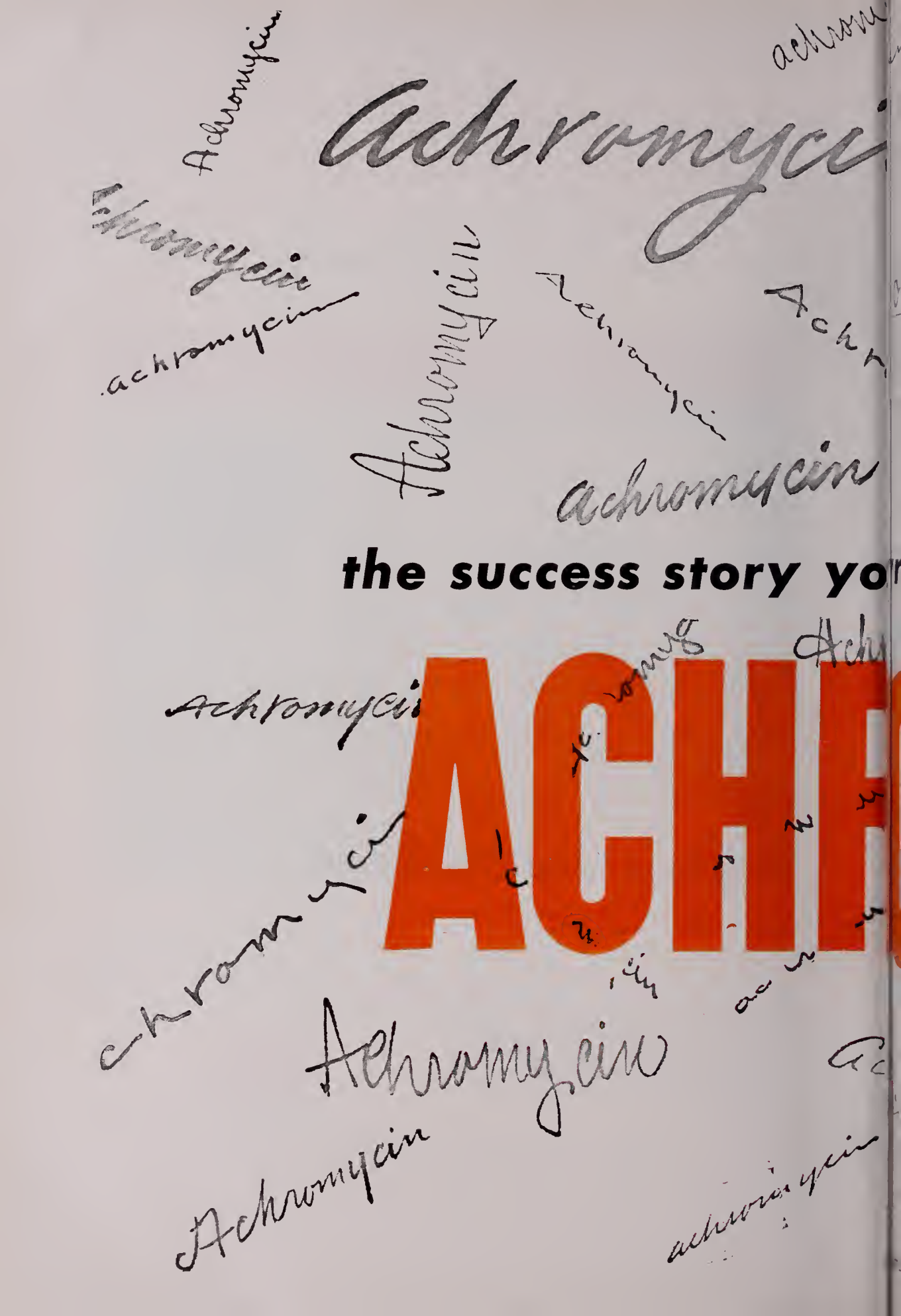
REFERENCE: 1. Robinson, R. C. V., *J.A.M.A.* **157**:1300, April 9, 1955.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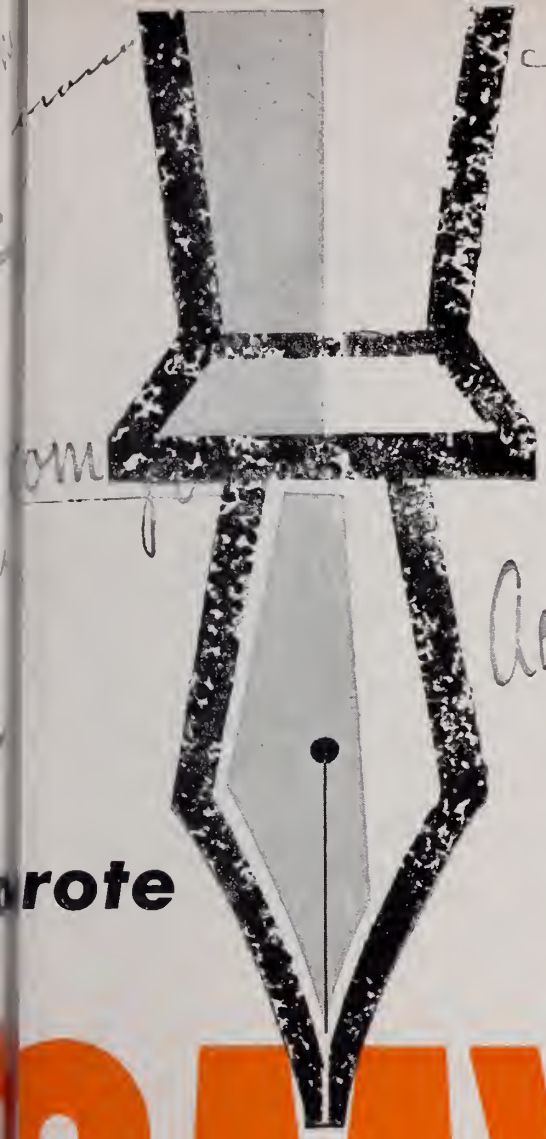

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EMOTIONAL PROBLEMS AND WHAT YOU CAN DO ABOUT THEM: by William B. Terhune, M. D.; William Morrow and Company, Inc., New York, 1955; 190 pages; $3.00.

Dr. Terhune, whom many of us know as one of the outstanding men in private psychiatric work in this country, has attempted in this book to boil down into practical, commonsense language some of his ideas about everyday emotional problems.

He has taken a positive approach to healthy thinking, feeling, and acting. This is shown especially in such a common-place thing as worry. He says, "It is not your trouble that upsets your life—but the way you take it." His book is full of encouragement for the average person, beset by doubts about his capacities and goals.

There is a great deal of psychological first aid for children and parents of children which, in its simplicity, offers a real contrast to much of the garbled lingo seen in present day press and publications. This is a helpful collection of ideas, needed and readily usable by every family physician, minister, teacher, and family.

Needless to say, many of these ideas expressed are used in ordinary counseling situations, but, nevertheless, coming from Dr. Terhune, with his breadth of experience, they take on special value. This is a book well worth having in your library.

E. E. Landis, M. D.

REACTIONS WITH DRUG THERAPY: Harry L. Alexander, M. D.: The W. B. Saunders Company, Philadelphia, Pa., 1955; 301 pages; $7.50.

Dr. Alexander's book comes to us at a time when untoward drug reactions comprise an ever increasing clinical problem. The introduction of a vast number of new drugs during the past few years has greatly magnified this problem. Heretofore, there was no concise record of drug reactions per se; one had to rely on a large literature in order to obtain necessary information on this subject.

Dr. Alexander has outlined in concise form the manifestations of hypersensitivity (skin eruptions, blood dyscrasias, fever, shock, etc.) in which drugs are the etiologic agent. No attempt is made to cover poisoning from overdosage or expected pharmacologic action.

Chapter I deals with a discussion and definition of hypersensitivity. In chapter II the mechanisms of hypersensitivity are outlined. Chapters III and IV list the various drugs found to produce reactions, along with a discussion of their dermatological and systemic manifestation. Chapters V, VI and VII are concerned with the chemotherapeutic and antibiotic drugs used to combat infections. Subsequent chapters cover the antiarthritic drugs, sedative drugs, drugs used in cardiovascular disorders, antithyroid drugs. antihistamine drugs, organ extracts, vitamins, serum and vaccines, plant products, local anesthetics, and a group of miscellaneous preparations. An adequate and up-to-date reference list is found at the end of each chapter.

Twenty-three tables are included for the convenience of the reader. In many of these tables drugs are listed according to the type of hypersensitivity reaction produced. The author places emphasis on the fact that a few drugs are responsible for the majority of reactions.

The practitioner will find this volume not only interesting reading but a practical reference when confronted with a patient presenting symptoms or signs of drug hypersensitivity.

Grover Sanders, M. D.

FLUOROSCOPY IN DIAGNOSTIC ROENTGENOLOGY: Otto Deutschberger, M. D.; The W. B. Saunders Company, Philadelphia, Pennsylvania; 1955; 771 pages.

This book seems to be a voice out of the past in that the author resurrects the old argument concerning the advantages and disadvantages of fluoroscopy as contrasted with roentgenography. This discussion, to my mind, ended some years ago when it was recognized that a proper roentgenological examination of the patient may require fluoroscopy and/or roentgenography for evaluation of the patient. In present day diagnostic roentgenology there is no need to go into these discussions of the past.

The book itself represents a compilation of numerous diseases and conditions as described in the standard radiological texts. Nothing new has been added to our knowledge by this book. In general, the book is not as much concerned with the technical aspects of fluoroscopy as it is an attempt to write a textbook on diagnostic

(Continued on page 746)

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IN THE BOOKS

(Continued from page 744)

roentgenology under the title of fluoroscopy.

Such things as a chapter on fluoroscopy of the head with demonstrations of changes in the air-filled ventricular system are completely out of place. Also, the author makes the statement on Page 93 that it is entirely proper for a surgeon to operate on a foreign body while the x-rays are on when his hands are not covered by lead gloves. That, of course, should never be done. The author further remarks that a so-called "cryptoscope," that is, a small fluoroscopic box attached to the head, may be used. So far as I know, nobody has used one of those for at least 20 years in this part of the country. It is an exceptionally dangerous procedure, inasmuch as it is almost impossible to protect either the physician or the patient from radiation hazards during its use.

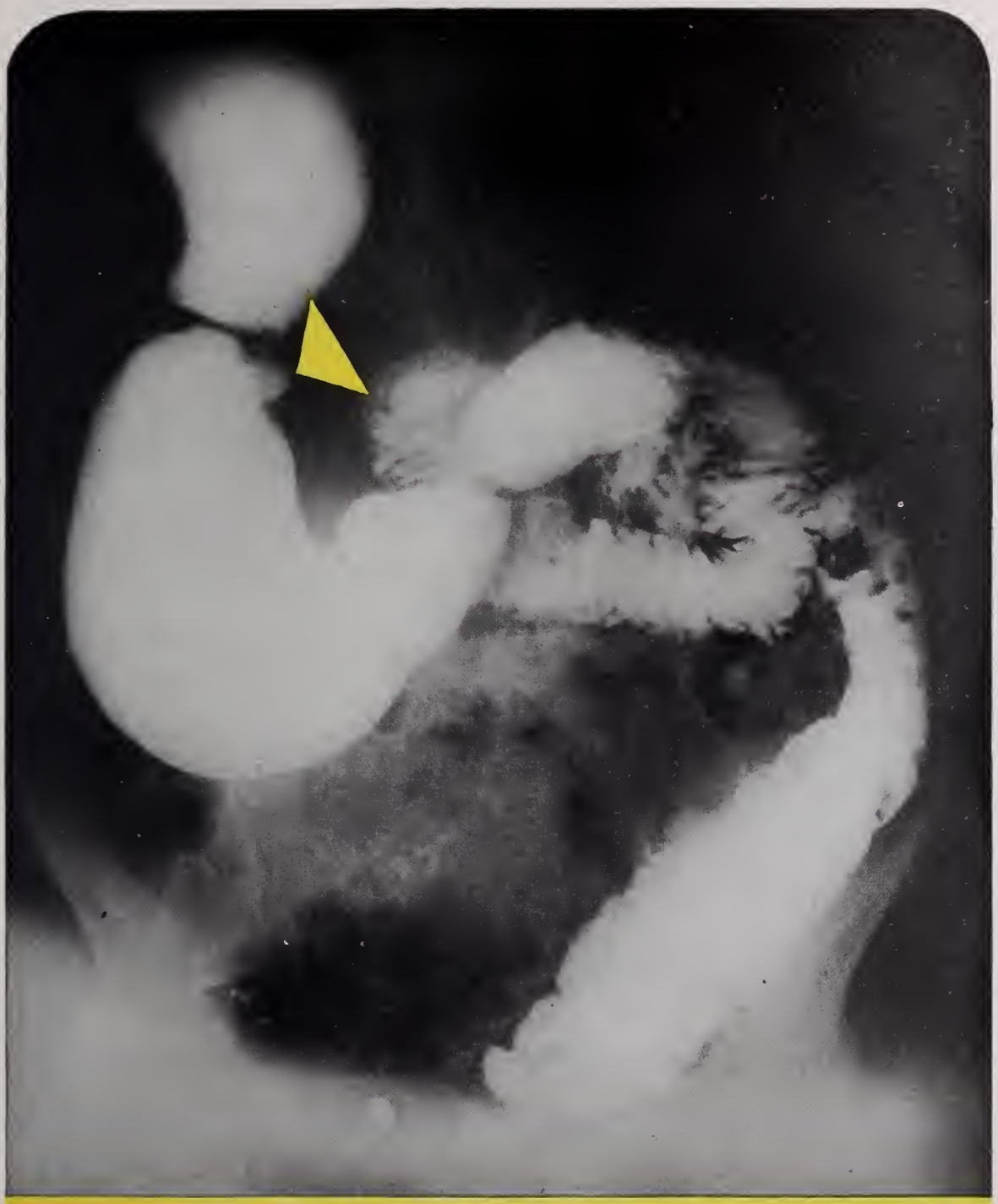
On Page 76 the author states that occasional fluoroscopies do not require a lead rubber apron for the physician. That, of course, is absolutely not true in light of our present knowledge of the long-term effects of radiation on the hemopoietic system. On page 75 the author makes the statement, "Even the occasional operation (of the fluoroscope) with the unprotected hand will not lead to serious consequences." A statement such as this in a textbook for general distribution to the profession should never be made.

As a radiologist with the responsibility for teaching medical students and young physicians the value of diagnostic radiology in medical practice, I cannot approve of either the approach, content, or most of this author's conclusions as stated in his book. As mentioned initially, it seems like words out of the past and in the long run will do fluoroscopy more harm than good.

Everett L. Pirkey, M. D.

The Louisville Heart Association recently purchased the first in a series of "Cardiac Clinics," a packaged audio-visual medical lecture kit, from the American Heart Association. The kit, designed to enable the physician to continue his medical education at his convenience in the comfort of his home or office, will be available on loan to any physician in Louisville or Jefferson County.

"When You Invest," a 25-cent pamphlet published by the Public Affairs Committee, weighs the value of investment companies and mutual funds for persons with modest means. Maxwell S. Stewart is the author of the pamphlet, which may be secured by writing the Public Affairs Committee, 22 East 38th Street, New York City.



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WASHINGTON NEWS DIGEST

Washington, D. C. —Although very little health legislation actually was enacted in the first session of the 84th Congress, a number of important bills made enough progress to insure they will get serious consideration when the second session starts next January.

Foremost is a bill to amend the social security act, and, among other things provide OASI payments for disabled workers after age 50. The present provision (enacted in 1954) protects a disabled worker's pension so it is not decreased because of his years of unemployment, but payments don't begin until he reaches 65.

The new plan, sponsored by Democratic members of the House Ways and Means Committee, was rolled through the House after closed committee hearings. But when it got to the Senate, Chairman Harry Byrd of the Finance Committee held it up, saying it was too important to be reported out without the complete hearings he plans for next session.

The American Medical Association is flatly opposed to cash disability insurance. One important reason is the Association's conviction that federal machinery necessary to regulate disability examinations inevitably would project the government into the medical care field. There are many other reasons, including the relationship between cash payments for disability and the patient's interest in rehabilitation. The issue of disability pensions will be settled next year in the Byrd Committee or on the Senate floor.

A bill for $90 million in grants for building and equipping non-federal research facilities passed the Senate, and is awaiting action in the House Interstate and Foreign Commerce Committee. Hearings have been held on a bill for U. S. grants to medical schools and on another (Jenkins-Keogh) to allow self-employed persons to defer income tax payments on part of their income put into annuities.

Other bills that will be ready for action in January include legislation to stimulate nursing education, improve the medical care of military dependents, authorize health insurance for government workers, authorize U. S. guarantee of mortgages on health facilities, and offer military medical scholarships. The administration's bill for reinsuring health insurance plans by now is a little shopworm, but it still might be pushed again next year.

President Eisenhower has made it known he wants Congress to get to work on health legislation early next session. His urging might not be needed. Next year is a presidential election year, and both parties will exert themselves to enact, and take credit for, new health programs that carry public appeal.

Despite the hundreds of hours of hearings in Senate and House, not a single important permanent medical program was set up by Congress in the last session. A national mental health survey, supported by the AMA, was enacted, but the administration's plan for mental health grants will be up for action next year.

Ignoring protests of physicians and dentists, Congress extended the doctor draft act for another two years, after first adopting two amendments. It exempted all men over 45, and all 35 or older who previously had been rejected for medical commissions for physical reasons alone.

For almost four months Congressional committees pondered what to do about Salk poliomyelitis vaccine. At first there were two main questions: 1. How much money should Congress spend to buy vaccine for free shots, and who should get them? 2. How far should the federal government move into the picture to insure equitable allocation?

One of the proposals—this even got through the Senate—was to offer unlimited money to the states, which in turn could give free shots to any persons or group of persons under age 20. President Eisenhower's idea—which he urged on Congress several times—was simply to insure that no person in need of the vaccine would go without it for financial reasons. Eventually his view prevailed and the states now are drawing on a $30 million fund. This law expires next February 15.

As weeks passed, there was less and less enthusiasm for setting up a federal allocation system, which Secretary Hobby and Surgeon General Scheele repeatedly told Congress wasn't needed. Consequently, when the National Foundation announced it had all the vaccine it needed for its program, a voluntary allocation plan was put in effect. The plan has the support and cooperation of physicians, pharmacists, drug manufacturers, and the state health officers. The Department of Health, Education, and Welfare is the liaison between the pharmaceutical houses and the states, dividing the vaccine on the basis of the number of unvaccinated persons in the eligible age groups.

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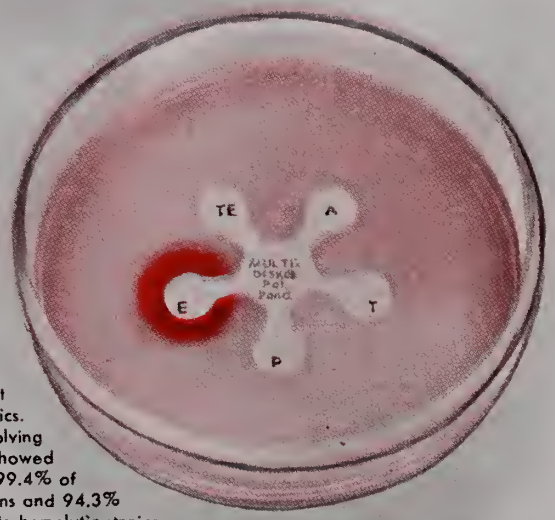

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This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enterococcic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

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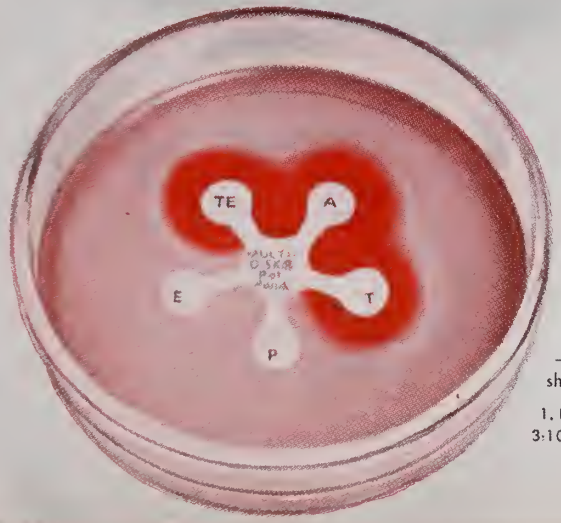

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1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

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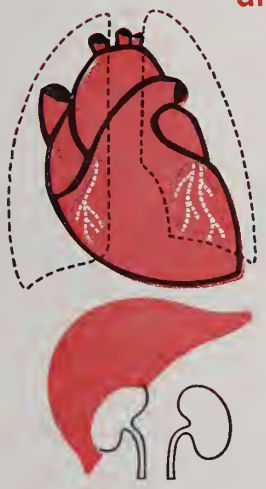

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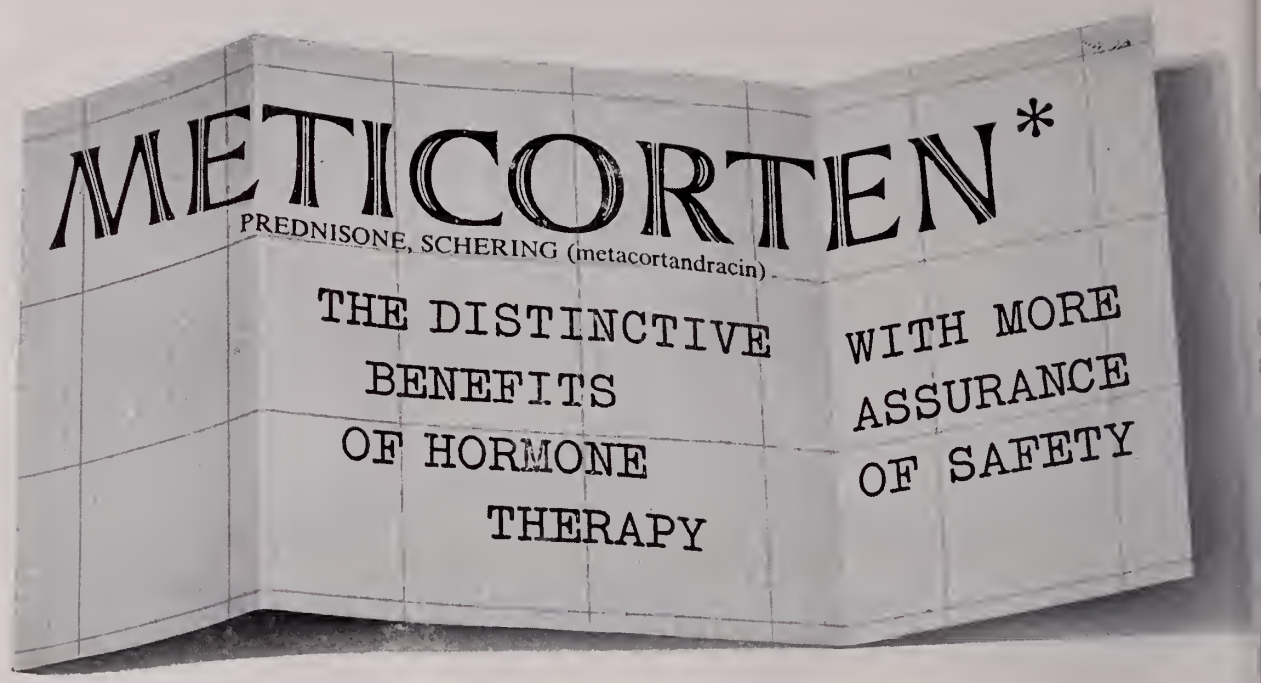

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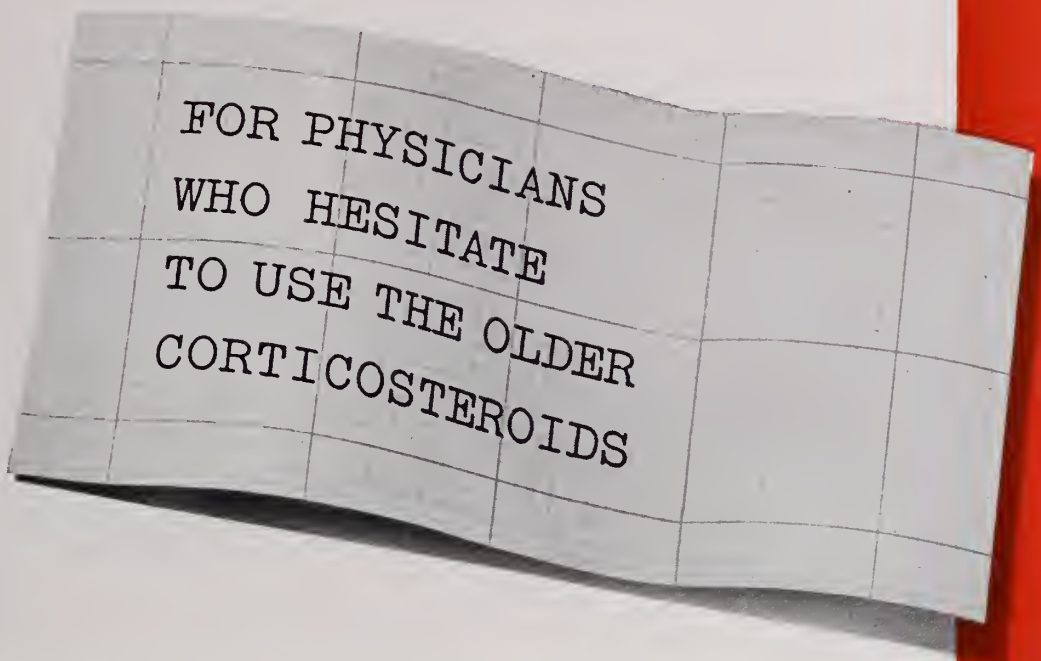

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The JOURNAL of the
Kentucky State Medical Association

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOL. 53 SEPTEMBER, 1955 NO. 9

Vaginal Hysterectomy*

SAMUEL S. GORDON, M. D., F.A.C.S.**
Louisville

The decision for hysterectomy should always rest with the integrity and professional judgment of the individual surgeon. There is no defense for unnecessary surgery and every effort of our combined forces should be exerted towards eliminating abuses. However, we must be aware of changing concepts in medical progress and recognize that our current indications for hysterectomy are more liberal than those of a decade ago. We no longer treat menopausal bleeding with radium when hysterectomy is as safe and produces more lasting results. Vaginal or abdominal uterine suspensions for prolapse and retroposition are passing from the scene of modern gynecology, because hysterectomy permits of a better repair of the defect in the pelvic floor. Whenever childbearing functions of the uterus have been completely fulfilled and the pathology in the organ warrants surgical therapy, hysterectomy has proved more satisfactory than temporizing operations upon the cervix and corpus uteri. Frequently, total hysterectomy is done when both tubes must be removed for benign disease, because years of experience have taught us that the retained uterus harbored disease which eventually produced a recurrence of original symptoms.

Changing Concepts

Changing concepts have affected the incidence of hysterectomy throughout the country. In Louisville, the total number of such operations done at the Louisville General Hospital, over the ten year period between 1944 and 1954, has doubled, while in four private institutions it has tripled. One's immediate reaction to this statement is to question the discrepancy between the two figures, but when it is realized that the facilities at General Hospital have been curtailed in recent years because of limited finances, and ten gynecological beds now serve where 20 were formerly available, it can be understood that the total census of patients has been affected. In private practice, patients have a voice in the treatment they receive and are unwilling to endure long periods of observation or undergo prolonged investigations. They rightly demand personal attention and quick results. Whereas a diseased uterus in a clinic patient may be observed over weeks or months and eventually salvaged, most private patients would not tolerate the delay nor the added expense without positive assurance that an operation would not eventually be necessary. No such assurance can be given in most cases and the patient decides upon hysterectomy because it holds out for her a more rapid recovery and a more definitive end result.

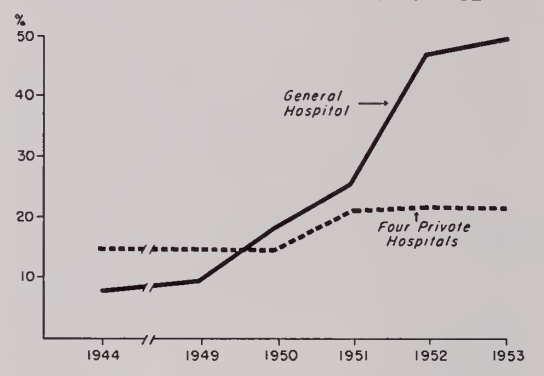
Historical Background

The earliest hysterectomies on record were performed per vaginum. The techniques were crude and the final result questionable, but the procedure continued in popularity for many centuries while the dangers of abdominal surgery were great. With the advent of asepis, better anesthesia and improvement in abdominal surgery, hysterectomy by the vaginal approach waned appreciably. Many respected teachers and prominent gynecologists seldom employed the technique, and the

*Read before the Kentucky Obstetrical and Gynecologic Society during the Annual Meeting of the Kentucky State Medical Association, Louisville, September 22, 1954.

**Associate Professor, Department of Obstetrics and Gynecology, University of Louisville School of Medicine; and Chief of the Department of Obstetrics and Gynecology, Jewish Hospital Division, University of Louisville Hospital Center.

vaginal operation became an oddity. This was the situation in the United States in 1934, when Heaney presented his first paper on an improved technique for vaginal hysterectomy before the Chicago Gynecological Society. His presentation was met with a great deal of expected opposition and resistance; his movement was delayed another decade or more by the controversy then existing between total versus subtotal hysterectomy. Louisville mirrored the practice then prevalent throughout the profession, and vaginal hysterectomy was done only occasionally and for very strict indications.



Slowly the Chicago influence made its way across the Ohio River, and when the great debate on the complete versus the partial operation came to an end, vaginal hysterectomy emerged the procedure of choice. There is no competition between vaginal and abdominal hysterectomy, and a well trained gynecologist should be thoroughly adept at both avenues of extirpating the uterus. The operation should be tailored to the pathology encountered, while considering the entire patient. Vaginal hysterectomy has its limitations; it requires more surgical dexterity, and exposure is limited. From the patient's standpoint it has the advantage of being less shocking at the time of surgery and less distressing postoperatively.

Material

In discussing the two types of operations, I shall relate my personal experience with a hundred vaginal hysterectomies and a hundred abdominal hysterectomies done consecutively prior to June 30, 1954. These operations were performed in seven different private hospitals, with various assistants and under varied conditions.

The age distribution is shown in Graph II, and follows closely that reported by W. O. Johnson in 1948. Since pelvic relaxation was a primary consideration in deciding upon the vaginal operation, it is not surprising that all those patients were multiparae.

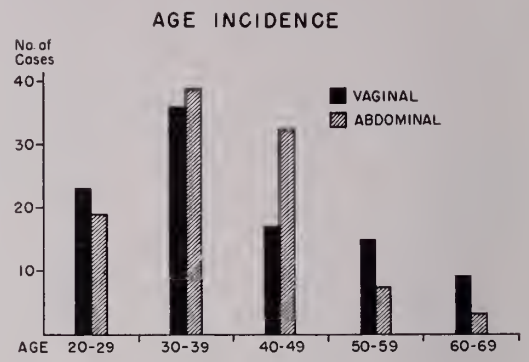


TABLE 1

PREOPERATIVE DIAGNOSIS

	Vaginal	Abdominal
RECTOCELE	97	10
CHRONIC CERVICITIS	91	67
PROLAPSE	91	15
CYSTOCELE	52	3
BLEEDING	44	44
DYSMENORRHEA	13	16
FIBROIDS	10	33
SUBINVOLUTION	2	11
PREGNANCY	0	1
CHRONIC ADNEXITIS	0	41
ENDOMETRIOSIS	0	3
SQUAMOUS CELL CARCINOMA OF CERVIX (in situ)	0	1
OVARIAN CYST (benign)	0	1
SOLID TUMOR OF OVARY (benign)	0	1

The preoperative diagnosis presents a very interesting comparison between the cases done vaginally and those done abdominally. The vaginal hysterectomy was chosen whenever possible in patients who required repair of the pelvic floor. As will be noted in Table 1, 97 cases had a posterior colporrhaphy, and 52 had both an anterior and posterior repair. Some degree of prolapse was present in 91 of the vaginal hysterectomies as compared to 15 of those done abdominally. The history of bleeding was equally distributed between the two types of cases, as was dysmenorrhea. Since fibroids are usually of some size before they produce symptoms, there were three times as many hysterectomies done abdominally for fibroids as were done per vaginum. Subinvolution and passive congestion of the uterus was much more common among the abdominal cases because of the frequency of adnexal masses. A therapeutic interruption by abdom-

inal hysterectomy of a four months intrauterine pregnancy was done at the request of the family physician following extensive psychiatric consultation. No patients with recognized chronic adnexitis were operated upon vaginally, forty-one were done abdominally. Three cases of endometriosis were diagnosed before surgery in the abdominal group and one squamous cell carcinoma in situ of the cervix was treated by abdominal hysterectomy. Two hysterectomies were done as incidental procedures in patients operated upon for benign ovarian neoplasms.

TABLE 2
MEDICAL COMPLICATIONS

	Vaginal	Abdominal
HYPERTENSION	3	0
CARDIAC DISEASE	3	1
CHRONIC NEPHRITIS	3	1
POLYCYSTIC KIDNEY	1	0
PEPTIC ULCER	1	0
DUODENAL ULCER	0	1
BRONCHIAL ASTHMA	1	0
HYPERTHYROIDISM	1	0
POLYCYTHEMIA VERA	1	0
ARTHRITIS OF SPINE	0	1
TERMINAL ILEITIS	0	1
PSYCHOSIS	0	1

When the patient is obese or has some serious medical condition, which makes her a poor surgical risk, the vaginal route for hysterectomy is preferable because it is less shocking. There is less postoperative distension because the bowel is not manipulated and patients are more comfortable without abdominal incisions. Serious preoperative medical conditions, listed in Table II, were more frequent in the vaginal cases. Patients whose medical conditions were so serious that they were poor risks for even vaginal operations, received only palliative gynecological therapy.

TABLE 3
PREVIOUS SURGERY

	Vaginal	Abdominal
VAGINAL REPAIR	4	3
ABDOMINAL SURGERY		
Upper	5	4
Lower	26	32
PELVIC SURGERY		
Uterus	1	9
Tubes	3	6
Ovaries	4	6
Ligaments	4	2

Previous pelvic surgery makes vaginal hysterectomy hazardous or impossible unless the vagina permits adequate exposure and the uterus is not bound to other pelvic organs by dense adhesions. Appendectomy was the most common previous operation, but several had myomectomies, salpingectomies, oophorectomies and uterine suspensions.

Technique

The operation performed by the author is the Heaney technique with certain personal modifications. Preoperative preparation consists of : admission to the hospital the afternoon preceding surgery, to permit work-up by the house staff, a light diet in the evening, and Seconal, grains one-and-one-half, at bedtime. The routine on the morning of surgery includes: perineal preparation; soap suds enema; one-half of one percent Lysol vaginal douche; no breakfast; Seconal, grains one-and-one-half, two hours before surgery; Demerol, 100 milligrams and scopolamine, 1/150 grain hypodermically one half hour before going to the operating room.

The anesthetic, usually a spinal, is administered by the anesthetist shortly before the patient is placed in lithotomy position. The perineum and vagina are thoroughly cleansed with green soap and sterile water followed by an application of tincture of Mercresine. The patient is draped in a slight Trendelenburg position and the urinary bladder catheterized. Reexamination under anesthesia by the operator is to verify his original findings, and a weighted speculum is inserted to expose the cervix-uteri. A sterile towel is clipped to the patient's drapes just at the level of the anus and attached to the gown of the operator to act as a temporary holder for instruments. The cervix is grasped with two Jacob's clamps, one applied to each lip of the cervix, and the uterine cavity explored with the uterine sound to reaffirm its size. A circular incision is made through the vaginal mucosa, circumscribing the cervix at the bladder reflection. The posterior cul-de-sac is exposed with the back of the knife handle and the peritoneum picked up with Allis forceps. The peritoneum is incised with the dissecting scissors and the cul-de-sac explored with the index finger. A Dever retractor is placed in the opening to pull the uterus forward and the cut edge of the peritoneum is easily exposed for suturing to the posterior vaginal cuff. The sutures are held long, and a straight Kelly

forceps is allowed to hang down over the edge of the weighted speculum. The Dever retractor is removed and re-applied posteriorly to hold the rectum out of the way. The utero-sacral ligament on the left side is palpated and a Heaney hysterectomy clamp applied close to the cervix. The ligament is severed proximal to the clamp and ligated with a transfixation lock suture which is held long by a curved Kelly clamp. The cardinal ligament and the pillar of the bladder on the same side are similarly treated, but this suture is cut short. The same procedure is carried out on the right side, checking for hemostasis all the while. The anterior vaginal cuff and attached urinary bladder are now dissected away from the cervix and the anterior surface of the uterus by blunt and sharp dissection, until the fold of peritoneum is exposed. The peritoneum is picked up by an Allis forceps and incised close to the uterus, holding the vaginal cuff and urinary bladder up and away from the field of operation with an Army retractor. If an anterior colporrhaphy is not anticipated, the free edge of the peritoneum over the urinary bladder, is sutured to the middle of the anterior vaginal cuff and the suture held long for identification. A second Dever retractor is introduced to hold the urinary bladder up and thus expose the anterior wall of the uterus. The posterior jaw of a Heaney hysterectomy clamp is placed behind the posterior leaf of the left broad ligament so that its tip can be seen through both leaves of the broad ligament just above the uterine vessels near the lateral margin of the cervix. The clamp is secured, and using a Heaney needle holder with a small, round, cervical needle threaded with one-third length chromic 0 catgut, the suture is placed and tied as the clamp is removed. This ligature is cut and the Heaney hysterectomy clamp re-applied at the same area just medial to the first suture. The broad ligament and uterine vessels are now cut and a transfixation lock suture applied as this clamp is removed. This suture is also cut short, thus doubly ligating the uterine vessels; the opposite uterine vessels are treated in a similar manner. When the uterus is large, another bite or two of broad ligament must be taken, cut and ligated before the fundus can be delivered posteriorly through the vagina. On occasion it has been necessary to bisect the organ or employ the Lash technique for coring it out. With the fundus delivered posteriorly and the cervix held in front of the pubis, the right cornum of the uterus is exposed to allow the Heaney hysterectomy clamp to be placed over the proximal portions of the right tube, meso-salpinx, ovarian ligament and upper margin of the broad ligament. A simple ligature replaces the clamp and the opposite side is treated in the same manner. A Heaney clamp is then applied medial to the suture on the left side, and another applied to the round ligament so that their points cross. The uterus is severed from these clamps, leaving enough tissue behind to assure a firm grasp; the opposite side is treated in a similar manner. The uterus is thus removed from the operative field and a complete inspection and palpation of both adnexa are made. Should it be necessary to remove the tubes and ovaries, Heaney clamps may be applied to the infundibulopelvic ligament and the adnexa excised. The four clamps are transfixed with lock sutures of chromic 0 catgut, and those identifying the round ligaments are held with straight Kelly's. Both broad ligaments are inspected and any bleeding secured. The left margin of the vaginal cuff, anterior to the uterosacral ligament is picked up with an Allis forceps and a suture placed through the vaginal wall about five m. m. from its cut edge and carried inward to pick up broad ligament, a high point on the round ligament, anterior peritoneum behind the urinary bladder, posterior peritoneum, uterosacral ligament and passed through the vaginal wall again about five m. m. from its origin. The same is done on the opposite side and the sutures are tied. The vaginal cuff is closed with two or three figure-of-eight chromic 0 catgut sutures, incorporating anterior and posterior vaginal wall with the attached peritoneum. The wound is not drained. When an anterior colporrhaphy is necessary, it is done after the two lateral sutures are placed, but before they are tied. A posterior colporrhaphy follows the closure of the vaginal cuff.

Postoperative Care

Postoperative care consists of: 2000 cubic centimeters of intravenous 5% glucose in normal saline with one ampule of Solu B. C. added; Dilaudid 1/32 grain by hypodermic every four hours as necessary for the relief of pain: diet as tolerated; early ambulation; and Seconal, grains one-and-one-half, at bedtime whenever required. The urinary bladder needs special attention. If the patient is unable to void she is catheterized every eight hours, or more frequently as necessary. After each cathe-

terization, one ounce of 10% freshly prepared Argyrol is instilled into the urinary bladder. When bladder symptoms continue after twenty-four hours, a Foley catheter is left in place and irrigated every eight hours with dilute boric acid solution. Once the patient is able to void voluntarily, she is catheterized for residual urine after each voiding, until the amount is 30 cc. or less.

Postoperative Diagnosis

In most instances the report from the pathologist concurred with the clinical findings. Prolapse, rectocele, cystocele and dysmenorrhea cannot be demonstrated under the microscope, but may be as debilitating to the patient as fibroids, chronic salpingitis and endometriosis. Finding pelvic relaxation in itself is not an indication for surgery, but when it produces debilitating symptoms which can be relieved by the therapeutic test of a vaginal pessary, one need make no apologies for performing a hysterectomy and any other necessary vaginal surgery on a woman in whom childbearing is no longer desirable or likely.

TABLE 4

PATHOLOGY DIAGNOSIS

	Vaginal	Abdominal
CHRONIC CERVICITIS	97	99
FIBROIDS	20	37
ENDOMETRIAL POLYPS	7	8
ENDOMETRIAL HYPERPLASIA	7	7
SUBINVOLUTION	3	1
ENDOMETRIOSIS	2	14
PREGNANCY	1	2
CHRONIC ADNEXITIS	0	44
ACUTE APPENDICITIS	0	2
ADENOCARCINOMA OF ENDOMETRIUM	0	1
FIBROMA OF OVARY	0	1
PAPILLARY CYSTADENOMA OF OVARY	0	1
PLACENTAL POLYP	0	1
SEROUS CYSTADENOMA OF OVARY	0	1
SQUAMOUS CELL CARCINOMA OF CERVIX (in situ)	0	1
TUBERCULOUS ENDOMETRITIS	0	1

Chronic cervicitis was consistently present in both types of cases and is so common that a badly diseased cervix in itself is seldom the primary indication for either type of operation. Since small fibroids rarely produce symptoms, most of them found in the vaginal cases were incidental. In only one-half of these cases were they of clinical significance and mentioned in the preoperative diagnosis. It is therefore not surprising that about twice as many fibroids were found in the abdominal pathology reports. Endometrial polyps and endometrial hyperplasia were equally distributed. There was a marked discrepancy between the clinical and pathology demonstration of subinvolution, but the only explanation seems to be that a large, boggy uterus on bimanual examination is difficult or impossible to recognize on the cutting slab of the pathologist. Endometriosis so often was a part of the more formidable pathological state, that it was only a microscopic diagnosis in most instances. It is not surprising that this condition was more common among the abdominal cases because of its characteristic fixation of pelvic structures. An old ectopic pregnancy was found in one of the abdominal hysterectomies which was associated with chronic salpingitis. A vaginal hysterectomy and colporrhaphy was done on a patient with menometrorrhagia and uterine prolapse, following conservative treatment of many months. The endometrium showed decidua, microscopically, and although no fetal products of conception were found, the case was classified as one of pregnancy. Chronic adnexitis was a frequent abdominal finding and on two occasions the appendix was involved in the inflammatory process. One very early adenocarcinoma of the endometrium was demonstrated by the pathologist in a specimen removed through the abdomen, and a small, serous cystadenoma of the ovary had also been missed clinically. A specimen containing a placental polyp was unexpected, but the case of tuberculous endometritis was part of a hysterectomy done for tuberculous salpingitis diagnosed at the time of laparotomy.

Complications

The accepted standard for morbidity, an elevated temperature of 100.4 on any two successive days following the first twenty-four hours postoperatively, was applied in this study.

It will be noted that the more serious complications were encountered in the laparotomy patients, including adynamic ileus, pelvic abscess, pneumonia and pulmonary embolus. Urinary complications were seen more frequently in the vaginal patients. It is interesting to observe that

Table 5

MORBIDITY

	Vaginal (30)	Abdominal (28)
ABDOMINAL WOUND INFECTION	0	4
ACUTE PYELITIS	0	2
ADYNAMIC ILEUS	0	8
GASTRIC HEMORRHAGE	1	0
PELVIC ABSCESS	0	2
PELVIC HEMATOMA	1	0
PNEUMONIA	1	2
PULMONARY EMBOLUS	1	2
TRANSFUSION REACTION	0	1
BLADDER COMPLICATIONS (cystitis and atony)	26	7

(Note: The two patients with pelvic abscess and one with adynamic ileus had abdominal wound infections and were classified in both categories.)

the patients with cystitis and bladder atony were usually those who had anterior repairs in addition to the hysterectomy. Patients with vaginal hysterectomy were more comfortable postoperatively, ate better and appeared less disturbed by the operation, although the course was morbid by our described standard. The temperature elevation seemed to belie the uncomplicated progress of the patient. It may well be that the bladder symptoms and the elevation in temperature were due to a stitch abscess in the vaginal cuff, since so often the temperature and urinary symptoms subsided when a small amount of foul smelling discharge appeared per vaginum. Immediate postoperative bleeding was encountered on two occasions, both of them vaginal patients. The first, from the vaginal cuff, bled on the second day and was easily controlled with packing of the vagina for twenty-four hours. The second case was from a small vessel of the vaginal wall at the site of the posterior repair which required suturing a few hours following completion of the operation. Delayed bleeding, weeks following surgery, was about the same in both types of patients, as was the incidence of granulation tissue requiring office treatment.

TABLE 6

HOSPITAL DAYS

	Vaginal	Abdominal
NON-MORBID	7.74 days	8.66 days
MORBID	10.79 days	9.06 days
AVERAGE	8.67 days	8.95 days

The average hospital stay was about the same in both types of patients, as is revealed in Table VI. Among the non-morbid patients, the vaginal cases felt well enough to go home a day sooner, but when there was an elevation in temperature, these patients, on an average, remained one day and a half longer than the abdominal cases. It must be remembered, however, that frequently, urinary bladder atony alone was the primary reason for keeping a woman in the hospital.

Summary

The decision for hysterectomy should always rest with the integrity and professional judgment of the individual surgeon. Unnecessary operations should not be tolerated but the current indications for removing the uterus are more lenient than a decade ago. The incidence of hysterectomy in Louisville has more than doubled in the past ten years, with the greatest increase in the vaginal procedure.

The author reports his personal experience with one hundred vaginal and one hundred total abdominal hysterectomies done consecutively prior to June 30, 1954, stresses that the gynecologist should be adept at both approaches and advocates that the operation of choice should be tailored to the individual patient.

The vaginal operation, described in detail, is preferred for benign uterine disease when there is some degree of pelvic relaxation, the organ is freely movable and not larger than a three months pregnancy. When rigidity of the vagina prevents adequate exposure, pelvic masses or adhesions make dissection from below hazardous, and when exploration of the abdomen is desirable, a laparotomy is preferred. Since vaginal hysterectomy is less shocking, and the postoperative course less disturbing, patients who ordinarily would be considered poor surgical risks, may be hysterectomized with greater safety.

The incidence of morbidity, judged by standard criteria, was about the same in both groups, although the feeling of well being in patients with vaginal hysterectomies belied their elevated temperatures. Urinary sequelae plagued the latter more often, but the serious complications occurred with greater frequency among the abdominal cases.

Immediate postoperative bleeding did not occur in the laparotomies. In the two cases in which bleeding was a complication, one bled from the vaginal cuff and

was easily controlled by packing the vagina. The other, which required suturing, was from a vaginal vessel in the posterior colporrhaphy.

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B. C. G. Vaccination*

J. C. PETERSON, M. D.**

Milwaukee, Wisconsin

Since Koch's isolation of the tubercle bacillus, physicians have sought a satisfactory antituberculosis vaccination. Numerous attempts were made to use the whole dead bacterium and a variety of its products with relatively little success.

Before considering the possibility of antituberculosis vaccination it is pertinent to inquire whether or not an attack of the disease leaves any immunity.

The earliest reliable information came not from human infection but from Koch's study of the pathogenesis of the disease. The injection of a moderate number of virulent tubercle bacilli into the guinea pig gives rise to three reactions. First, a small local lesion without destruction, second, a regional adenitis and third, a general invasion of the host's tissues. By grading the dose of the inoculum or the virulence of the organism it is possible to have some animals survive this infection. In such animals a second injection results in an entirely different reaction. First, there is a large local lesion which quickly ulcerates but then goes on to heal, second, the regional adenitis in contrast with that of the primary infection is minimal and the general invasion of the tissues is not encountered if the dose of the organism is approximately the same as that which would ordinarily, in the first infection, produce a progressive fatal disease.

This is a clear cut demonstration that the experimental animal after recovery from tuberculosis has an enhanced resistance to reinfection. It is true, and should be noted, that the local site of the second injection fares worse than the local site of the first injection, going on to necrosis and ulceration, but even so there is rapid healing of the lesion.

Natural Infection and Immunity

Do natural infections in people engender a similar degree of immunity? Hyge, in Denmark, observed a group of school children who were intimately exposed to a tuberculous teacher. In this group of school children 105 were known to have had previous tuberculosis and to have a positive tuberculin test. Ninety-four were known to be tuberculin negative. Following the exposure of these individuals, which was deemed to be relatively equal in the two groups, four of the people who had had previous tuberculous infection came down with clinical manifestations of the disease. Among the 94 who were tuberculin negative at the time of exposure, 41 developed tuberculosis. These observations show a striking difference between those with previous infection and those not so protected. Heimbeck, in Oslo, Norway, showed that over a period of years 2.6 percent of student nurses who were tuberculin positive at the start of their training developed tuberculosis during their training period, while among those who started tuberculin negative, 29.6% developed tuberculosis during their training.

Some students of tuberculosis say that these observations are not valid because

*Read before the Kentucky Chapter, American Academy of Pediatrics at the Annual Meeting of the Kentucky State Medical Association, Louisville, September 22, 1954.

**Marquette University School of Medicine, Department of Pediatrics, Milwaukee, Wisconsin.

the groups are not comparable. Those who were already tuberculin positive at the beginning of the experiment should include those who died or were otherwise unable to be included because of their tuberculosis. It is hardly likely however, that the deaths and withdrawal because of tuberculosis in the tuberculin positive control groups in either instance could have accounted for the very marked differences observed in the experiment.

The mechanisms by which the spread of tuberculosis is inhibited in the previously infected individual have been studied at some length. Five mechanisms are noted to play a part in this immunity. First, the spread of organisms within the tissue at the site of inoculation is retarded, second, organisms are removed from the circulation more rapidly and effectively, third, the bacteria in the circulation are destroyed more promptly, fourth, the multiplication of tubercle bacilli at the site of inoculation is less, and fifth, there is a degree of neutralization of metabolites from the tubercle bacilli in the individuals who have recovered from a previous tuberculous infection.

The next question of importance to the immunologist relates to the duration of immunity following a primary tuberculous infection, and here the answers are less definite. First, recurrent primary tuberculosis is unusual. Second, it is assumed that whatever immunity an individual has from a primary infection lasts at least as long as the duration of sensitivity, and such sensitivity in individuals who have had a primary tuberculosis infection lasts over a period of many years in the average case.

Natural Resistance

The next question of interest to the immunologist is that of natural resistance. It has been estimated that during the first year of life of the individuals who are infected, 5,000 per 100,000 would die of the infection. In the second to the fourth year of life the mortality rate is 123 per 100,000, approximately 1/40 the rate in the first year. In the period from five thru 14 years the mortality per 100,000 is approximately 18 or 1/275 the mortality in the first year of life and finally in the period from 15 thru 75 years, 61 to 90 per 100,000 die from infection. This yields a ratio of from one to 80 to one to 50 as compared with the first year of life. Thus we see that there is a very marked difference in the natural resistance of the individual to tuberculosis at various periods in life.

Another factor in natural resistance is that of the sex of the individual. In the first nine years of life there is a rough equivalence of the susceptibility of the two sexes. In the period of ten thru 29 years the female is more susceptible than the male, while in the period thirty thru 75 years the male is more susceptible than the female.

It has also been shown that there are racial differences in susceptibility to tuberculosis and students of tuberculosis in this country have in recent years pointed out that there is a marked familial susceptibility to tuberculosis. The question as to whether or not this familial susceptibility is truly a hereditary suceptibility or whether it is more importantly related to the environment is not entirely clear at the present time. But in all probability, both environment and hereditary factors play a role in familial susceptibility.

B. C. G. Vaccine

As previously mentioned, killed bacterial vaccines and extracts of tubercle bacilli have been utilized in trying to produce artificial immunity, but the results from such trials have been disappointing to the point where this approach to the problem of vaccination has been largely abandoned. All current attempts at artificial immunization against tuberculosis utilize either the B.C.G. vaccine or Vole vaccine. B.C.G. is a strain of bovine tubercle bacilli which has reached a stable avirulence permitting its use as a live vaccine. A brief review of the development of B.C.G. vaccine may be helpful in understanding some of the problems presented by this vaccination procedure.

In 1908 Calmette and Guerin working with bovine tubercle bacilli found that one strain had lost its virulence for experimental animals to a large degree. Subsequently they cultivated this strain on a special media for many many generations, until there were no longer any virulent variants in the cultures. In 1921 they announced that the vaccine had been carried on under artificial cultivation to the point that it had become a virus fixe. In the following year, 1922, the first vaccinations using this vaccine organism were initiated in France. At that time many babies were orally vaccinated with B.C.G. These vaccination studies were poorly controlled and the information derived from them has been susceptible of criticism.

In 1930 in Lubeck, Germany, a large number of infants who had been vaccinat-

ed with vaccine supposed to be B.C.G. came down with progressive tuberculosis. This caused great consternation and B.C.G. vaccination was virtually suspended throughout the world. An investigation of the Lubeck disaster showed that virulent organisms and B.C.G. organisms were cultivated in the same laboratory and that the vaccine which was given as B.C.G. vaccine contained in reality virulent organisms. This catastrophe served to inaugurate precautionary measures which would absolutely preclude the possibility of virulent organisms ever finding their way into the cultures used for B.C.G. vaccine. It also established the need for proof that cultures of B.C.G. vaccine do not contain virulent organisms.

A great step in the development of B.C.G. vaccination was Wallgren's introduction in Sweden in 1928, of the intradermal administration of B.C.G. vaccine. The studies of Wallgren and his associates were continued without interruption and served as the basis for most modern B.C.G. vaccination experiments.

The next step in the development of B.C.G. vaccination was the introduction by Rosenthal of a method of giving the vaccine by percutaneous methods which tended to eliminate the occasional development of local necrosis at the site of the inoculation and the still rarer development of suppurative lymphadenitis which are seen secondary to the intradermal method of vaccination.

The ultimate step in the development of B.C.G. vaccination has been the production of vaccine which can be "freeze dried" and maintain its antigenic potency over long periods of time; enabling the laboratory to utilize every possible channel for safety determinations before the vaccine is released for use.

Safety of B. C. G. Vaccine

Many people have questioned the safety of B.C.G. vaccine and have postulated that under exceptional circumstances these cultures of bovine tubercle bacilli might revert to a virulent state. In the era before the Lubeck disaster there were a number of cases in which individuals who had been vaccinated subsequently died of tuberculosis but the bacteriologic examination of these cases does not permit adequate evaluation either pro or con. Following the Lubeck disaster the methods of production of the vaccine were tightened and fewer examples of questionable progressive infections from B.C.G. vaccination or following B.C.G. vaccination occured. However, in the last two years three cases of progressive B.C.G. infection have been well documented and added to the literature of this vaccination procedure. In these cases there can be no doubt but what the B.C.G. vaccine itself produced a progressive infection and this infection went on to a fatal termination in each case. The organisms were recovered and in all instances were identical with the organisms utilized for making the B.C.G. vaccine. These examples do not represent a reversion to a virulent state, but a lack of host capacity to respond to the organism, and therefore a progressive infection in spite of the fact that the vaccine is a relatively avirulent vaccine. It may be presumed that these individuals lack, in toto, a capacity to respond to the tubercle bacilli even in an avirulent state; surely they would have been examples of rapidly progressive tuberculosis had they been infected in a natural manner with virulent organisms. The modern studies in agammaglobulinemia suggests that these patients were examples of this disturbance or an equivalent state in which they are unable to develop any of the resistance mechanism to infection with tubercle bacilli.

Some opponents of B.C.G. vaccinations have attempted to utilize these very unusual cases as the reasons for abandoning B.C.G. vaccine or at least as reasons for tightening up the circumstances under which the vaccine might be employed. However, one can readily point out that the deaths from B.C.G. vaccine are no more frequent, probably less frequent, that the deaths from smallpox vaccinations directly attributable to progressive cowpox infection either in the form of generalized vaccinia or in the form of a progressive encephalitis. There is no serious attempt at the present time, by thinking, reasonable individuals, to abandon smallpox vaccination.

Methods of Administration

B.C.G. vaccine may be given in selected individuals by any one of three methods. The oral method, the one used in the first experiments of B.C.G. and now abandoned, the intradermal injection and the percutaneous or multiple puncture method.

The intradermal vaccination is the one which has been used most generally in recent years and in the wide experiments which have been carried on in continental Europe. With this method, .05 to .1 mg. of dried vaccine is suspended in 1/10 of a cc. of diluent and is injected intracutaneous-

ly after satisfactory preliminary sterilization of the skin. The vaccine is usually introduced into the deltoid area of the arm in adults and older children, and into the skin over the lateral aspect of the buttock in infants. With appropriate selection of the dose of vaccine and rigid control to prevent secondary contamination of the vaccine, such intracutaneous injections lead to the development of a small localized infiltrative lesion which may go on to produce superficial necrosis of the overlying skin without a definite abscess or ulcer forming. Associated with this there may be a slight enlargement of the regional lymph nodes but this does not, except in very rare instances, go on to suppurative inflammation of the nodes.

In the percutaneous methods of Rosenthal and Birkhaug, vaccine containing 20 mg. of B.C.G. per ml. is applied to the skin by means of a small piece of sterile paper. Then with the Rosenthal instrument the vaccine is introduced into the upper layer of the skin by pressing a plate with many sharp points through the paper and moving it so that the vaccine is carried down into the corium of the skin. The Birkhaug instrument for this purpose is a spring activated instrument and the vaccine is carried down into the deeper layers of the skin by means of 30 or 40 sharp points. The Rosenthal method is essentially painless and there is no pain or discomfort attached to the administration by the Birkhaug method. Reasonable equivalence in the success of the vaccination can be obtained either by the intradermal method or by one of the percutaneous methods. Tuberculin testing at six weeks, and at three months if the six weeks test is negative, is employed as a means of determining the success of the vaccination. Individuals who do not develop a positive tuberculin test by the end of the third month after vaccination are considered failures and should be re-vaccinated.

It should be pointed out that tuberculin sensitivity, the development of a positive tuberculin test and the immunity that results from the B.C.G. vaccination are not one and the same. However, there is such a strong association between the two that for practical purposes tuberculin sensitivity may be used as an index of immunization.

Effectiveness of B. C. G.

Many studies on the effectiveness of B.C.G. vaccination have been added to the literature. Four separate experiments may be cited as being satisfactorily controlled. The first are the observations of Hyge in Denmark where he studied the children intimately exposed to a tuberculous teacher. This has already been mentioned with respect to natural immunity resulting from previous tuberculous infections. And as you recall in the groups involved there, 41 of 94 tuberculin negative controls developed significant pulmonary tuberculosis. Four of the 105 who were tuberculin positive as a result of natural tuberculosis developed significant pulmonary tuberculosis and two of 106 who had received B.C.G. vaccination developed tuberculosis.

Similarly Heimbeck, in his study of Oslo nursing students, found that tuberculosis developed to the extent of 29.6% among those who were tuberculin negative and who were not vaccinated prior to their training. Among those who either because of previous tuberculous infection, had tuberculin sensitivity or who were sensitized by vaccination with B.C.G., tuberculosis was encountered to the extent of 2.6% and 2.3% respectively.

In this country Aronson carried out a controlled study of B.C.G. vaccination among the Indians on the reservations in the West, where tuberculosis was a serious endemic infection. He studied and followed about 3,000 children from 0 through 19 years who were found to be tuberculin negative on preliminary testing. Subsequently half of the individuals were vaccinated with B.C.G. and half served as controls to the B.C.G. vaccination. Of 1457 tuberculin negative individuals who served as controls, 185 or 12.7% developed tuberculosis and of these 28 died during the period of observation; a mortality rate of about 2%. Of 1551 who were vaccinated, five subsequently developed clinical tuberculosis and of these four died.

Finally, Dahlstrom studied Swedish conscripts at the time of their induction into service. There were 113,492 tuberculin positive at the time of admission and 61,474 who were negative. Of the negatives 36,235 were vaccinated and 25,239 served as non-vaccinated controls, thus there were nearly 50% more vaccinated individuals than non-vaccinated in this group. Among the vaccinated group there were 14 (or .39/1,000) who developed primary uncomplicated tuberculosis whereas there were 27 (or 1.07/1,000) in the non-vaccinated group who developed primary uncomplicated tuberculosis. There were 76 among the vaccinated who developed primary tuberculosis complicated by pleu-

ral effusion as contrasted to 115 who developed tuberculosis with pleural effusions among the non-vaccinated group and finally there were eight among the vaccinated group and 17 among the non-vaccinated group who developed equivalent degrees of progressive pulmonary tuberculosis. This study by Dahlstrom clearly indicates that the conscripts were not only afforded a considerable degree of protection against tuberculosis, an overall infection rate of 2.8/1,000 as contrasted to 6.3/1,000 in the non-vaccinated controls, but even more important, the degree of severity of the infection was not materially different in the two groups when superinfection did occur. In the vaccinated group 8.2% of the cases and in the controlled group 10.7% of the cases were severe infections and in each group the percentage of intermediate cases, those with pleural effusion, was almost exactly the same, 72%. This should allay one of the greatest criticisms of B.C.G. vaccination that has been advanced in the past, namely that tuberculin allergy would make any resultant secondary infection much worse. That this is not the case was clearly shown in this study.

In general, these studies show that people vaccinated with B.C.G. vaccine, when exposed to tuberculosis in their intimate environment and under similar circumstances, are afforded a considerable degree of protection against reinfection as contrasted with non-vaccinated controls.

Who Should be Vaccinated

Next we might consider who should be deemed to be eligible for B.C.G. vaccination. There are several specific categories of people who clearly should have the benefit of B.C.G. vaccination, even in this country where other means of control of tuberculosis are being actively and energetically pursued.

The first of these groups would be newborn infants from families where there is tuberculosis, even though the index patient may have an arrested infection, but where separation of the infant is possible. In such infants separation should be maintained until the infant can establish immunity, as demonstrated by the development of a positive tuberculin test, following the B.C.G. vaccination.

The second group of individuals who should have the benefit of B.C.G. vaccination would be tuberculin negative older infants or children living in homes where there is tuberculosis but where the children are still tuberculin negative. This tuberculin negative state should be determined after the individual has been removed from his tuberculous environment for a period of time long enough to permit the development of tuberculin sensitivity from a possible incubationary infection, a period of not less than 30 days.

The third group who should have B.C.G vaccination are those whose work environment provides a special risk. They of course should be proved to be tuberculin negative and should have the benefit of chest x-rays which exclude the possibility of their being in a pre-allergic phase of pulmonary tuberculosis. Among those who might be included in this category would be first, student nurses who on going into training would be exposed to risk of tuberculous infection: second, medical students, third, special classes of social workers who would be doing case studies in poor environment, fourth, people being employed by tuberculosis hospitals or sanatoria, fifth, those who would be admitted to institutions for the care of the insane or the mentally degenerate.

Revaccination

Finally we come to the question as to whether or not revaccination is necessary or desirable in tuberculosis prevention. Children who are vaccinated with B.C.G. in early infancy should be rechecked with tuberculin at intervals of about one year and if their liability of exposure continues they should be re-vaccinated when they become tuberculin negative.

In special risk groups such as nurses, medical students, social workers, hospital attendants etc., tuberculin tests should be performed routinely and the degree of tuberculin sensitivity noted. If these individuals become tuberculin negative they should have the benefit of revaccination with B.C.G. The tuberculin sensitivity engendered by an infection with B.C.G. is not sustained to the same degree as the tuberculin sensitivity from a virulent infection because it is apparent that B.C.G. die off in the body after a year or so whereas even minimal infections with virulent organisms are likely to persist over many years. In individuals whose exposure to tuberculosis is very great, superinfection with virulent tubercle bacilli probably would occur in many instances in subclinical forms which would permit the maintenance of tuberculin sensitivity.

Summary

In summary then, it may be said that B.C.G. vaccination like natural tuberculosis provides a certain degree of resistance to superinfection. This resistance is maintained for a shorter period of time in B.C.G. infections than in natural tuberculous infection. Even in the United States, where tuberculosis is rapidly being eliminated by careful attention to other public health measures, B.C.G. vaccinations would provide an additional safeguard against the development of virulent tuberculous infections for selected groups of patients.

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Sanatorium Care of Tuberculosis*

J. FRANK W. STEWART, M. D.**

Waverly Hills

The unsolved problem of hospitalization of the tuberculous in this country poses many problems. In recent years over one-third of all deaths from pulmonary tuberculosis occurred outside hospitals and institutions. There are many areas in the country which cannot find the means to provide hospital care for tuberculous citizens. Recent studies of mortality in nine populous southern states reveal that from 55 to 77% of deaths from tuberculosis occurred outside of institutions and sanatoria. The opportunity for spread of the infection from the family member who died at home to the family associates must have been tremendous, especially where poverty and over-crowding co-existed in homes economically distressed. Control of the disease will be impeded until a more realistic distribution of hospital facilities is accomplished.

There was a known shortage of over 50,000 beds for the tuberculous in the United States in 1947. This condition appreciably affects the quantity and quality of care that can be given.

Some Effects of Sanatorium Care

There has been a steady decline in death rate from 444 deaths per 100,000 population in 1860 to 26.3 deaths per 100,000 population in 1949. Dr. Henry D. Chadwick in his book "The Modern Attack on Tuberculosis" attributes this decline in great measure to the rapid growth of the "Sanatorium Movement" in the United States, particularly in the past 50 years. Sanatorium beds have increased from 9,000 to 102,000 in the past five decades.

The sanatorium care of tuberculous patients had its inception in this country when Dr. Edward L. Trudeau opened "The Little Red Cabin" at Saranac Lake in 1884. This was the start of the now more than 700 sanatoria in the United States with a bed capacity of 102,000.

The 102,000 patients occupying these beds cease to be a menace to the community during the period of isolation. Many of these patients are hopeless cases on admission and die in the institution. Members of this group render service to humanity by permitting themselves to be segregated during the most infectious period of their illness. The majority of the patients who recover are discharged with sputum free from tubercle bacilli and are able to resume their place in society. The care until death of the incurable cases and the treatment of the others until they are non-infectious and taught to live within their physical limitations are the true functions of a sanatorium.

The sanatorium is a place where patients' lives are carefully regulated. The rest periods are not interrupted as they would be at home by well-meaning but ill-advised friends.

Living a sanatorium life is a personal experience that makes the patient aware of his handicap and of the necessity of keeping within the limits of the safety zone defined by his disease. Rest, both mental and physical, is the keynote to getting well. I believe that most patients would be benefited by a short training

*Read before the Kentucky Chapter of the American College of Chest Physicians during the Annual Meeting at Columbia Auditorium, Louisville, September 22, 1954.

**Assistant Medical Director, Waverly Hills Tuberculosis Sanatorium, Waverly Hills, Kentucky.

period in the sanatorium even though they are to cure at home under the care of a private physician.

It is well known that selective cases of tuberculosis can be treated successfully at home, providing the home has the proper facilities for isolation and care; however, the number and distribution of physicians trained in chest diseases constitute fundamental factors in the management of ambulatory cases.

Combined Therapies

In the early days, since tuberculosis was not diagnosed in most cases until the far advanced stage, the main objective for sanatorium care was isolation. Bed rest was not enough to turn the tide. As the years have passed, various treatments have been added to the regime, such as pneumothorax and thoracoplasty, and in the past few years, chemotherapy and antibiotics in conjunction with pneumoperitoneum and resectional surgery. With these modern weapons the sanatorium now provides treatment for tuberculosis as well as isolation.

The real effect of bed rest is still unknown, yet its value in the active stage of tuberculosis remains widely accepted. It may be possible to shorten the period of bed rest by the use of anti-tuberculous drugs. Dr. Albert I. Defrez and his associates reported in "The New England Journal of Medicine," Jan. 14, 1954, that a recent evaluation of rest in minimal tuberculosis showed that strict bed rest was no more dependable than modified bed rest as treatment.

The Waverly Hills Program

It might be well to summarize briefly the hospital program at Waverly Hills. Patients are residents of Louisville and Jefferson County. They are admitted on the basis of active disease, whether minimal, moderately advanced, or far advanced. On admission the patient is interviewed and weighed, his temperature is checked, and he is given instructions, including a booklet "Guide to Recovery" before being put to bed. Routine x-ray and laboratory procedures are done as soon as possible. The Resident Physician sees the patient soon after admission, takes a history, and does a physical examination. Any special orders are written at this time. Within a week a medical student interviews the patient and writes up a more detailed history and physical examination. The case is then presented to the staff and treatment is recommended which is carried out by the Resident Physician. Re-x-ray and review of the case is done at one to four month intervals, depending on the case. The Rehabilitation Counselor and Medical Social Worker, who are full time at the sanatorium, see the Resident Physician and patient at an early date to see if they can be of any assistance in the long-term program. The patient's activities are determined according to his clinical condition. Usually, if he is not running a fever, he is permitted commode privilege on admission. As the patient's condition improves he is given more activity. All cases requiring surgery are operated on in the sanatorium. Consultation in some of the specialties has been available from some of the local private physicians. Other cases are transferred to Louisville General Hospital for service. Most patients are given graduated road exercise up to one-half hour twice daily before discharge to the Waverly Hills Clinic or back to their family physician. If the patient is carrying a pneumoperitoneum or pneumothorax, he returns to the Waverly Hills Out-Patient Pneumo Clinic for treatments.

Illustrative Cases

The following case summaries are cited as representative of the care patients receive while in the sanatorium:

Case 1. White female, age 26, hospitalized 32 months. This patient gave birth to a baby in July, 1951. At that time she was found to have far advanced pulmonary tuberculosis. She was treated with dihydrostreptomycin (DSM), grams one daily, in combination with para-aminosalicylic acid (PAS), for thirty days, by a private physician. She continued to run fever and lost weight, so she was advised to go to the sanatorium. She was admitted to Waverly Hills in October, 1951. Her sputum was positive on admission and negative after 14 months of treatment. The patient was put on rather strict bed rest and pneumoperitoneum was started. PAS, grams ten, was given daily for six months. Thereafter she continued on bed rest and pneumoperitoneum alone until January, 1953, when she was put on DSM, grams one twice a week, with isonicotinic acid hydrazide (INH), milligrams one hundred, three times a day, for six months. DSM and PAS were continued for another eight months. On May 1, 1953, resection of two segments of the right lung was performed. On May 18, 1953, a right thoracoplasty was performed. On November

25, 1953, a double wedge resection was done on the left. The patient became homesick and left against medical advice in June, 1954.

Case 2. White Male, age 27, hospitalized 34 months. This patient was admitted to the sanatorium in April, 1951, with far advanced pulmonary tuberculosis, after complaining of having a cold for the past three months. He was critically ill and looked hopeless. He had a fever of 101 degrees and his sputum was positive. The patient was put on strict bed rest with DSM, grams one daily, and PAS, grams twelve daily, for one month. Then he received PAS, grams twelve daily for eight months. In July, 1951, pneumoperitoneum was started. In September, 1952, left artificial pneumothorax was attempted but failed due to adhesions. In November, 1952, left extrapleural pneumothorax was performed. The latter procedure was covered with DSM, grams one daily, and PAS, grams twelve daily, for eighteen days. Then DSM, grams one twice a week, and PAS, grams twelve daily, were given for five months. In January, 1954, the patient was put on INH, milligrams one hundred three times a day, with PAS, grams twelve a day. All sputum examinations were negative after the resection. The patient was having marital difficulties and he signed out against advice in February, 1954. He returns to the Out-Patient Clinic for extrapleural pneumothorax and pneumoperitoneum refills. His sputum continues negative and he continues to gain weight.

Case 3. White male, age 27, hospitalized 11 months. This patient was admitted to the sanatorium in August, 1952, in a very debilitated and toxic condition, after having been treated at a private hospital for acute tuberculous peritonitis. He had far advanced pulmonary tuberculosis. His fever was 103 degrees on admission, and his sputum was positive. The patient was put on semi-strict bed rest with DSM, grams one daily, and INH, milligrams fifty, three times a day, for one month. INH was continued to February, 1953. Pneumoperitoneum was given. His temperature came down to normal after four months, and his sputum became negative after three months treatment. The patient gained 32 pounds weight. He was discharged in July, 1953. He was started on a rehabilitation program in a Louisville Comptometry school, but he soon lost interest and is now working as a weighman for the Kentucky State Highway Department. He returns to the Out-Patient Clinic at regular intervals for pneumoperitoneum refills.

Case 4. White male, age 27, hospitalized 21 months. This patient was admitted to the sanatorium in August, 1952, with far advanced pulmonary tuberculosis. He was coughing markedly and appeared chronically ill. His sputum was positive. The patient was put on strict bed rest and was given DSM, grams one twice a week, with PAS, grams twelve daily, for four months. There was clinical and x-ray improvement. The patient was only partially cooperative and he signed out from April to May, 1953. In July, 1953, he was again put on the same regime of DSM with PAS for four months. In July and August, 1953, a right upper lobe lobectomy with thoracoplasty was performed. His sputum was converted to negative. The patient was discharged in June, 1954. He returns to the Out-Patient Clinic for pneumoperitoneum refills and is now able to return to light work.

Case 5. Colored male, age 22. This patient was admitted to the sanatorium in February, 1953, with far advanced pulmonary tuberculosis. He had no complaints on admission, but said he had had a hard cold two months previously. The patient was given DSM, grams one daily, with PAS, grams twelve daily, for one month; followed by INH, milligrams one hundred, three times a day, with PAS, grams twelve daily, for three months; followed by DSM, grams one twice a week, with PAS, grams twelve daily, for 14 months. Pneumoperitoneum was started in November, 1953. His sputum was positive on admission but became negative after 11 months of treatment. The patient has recently undergone left upper resection.

Case 6. Colored male, age 50. This patient was first hospitalized at Waverly Hills Sanatorium from November, 1946, to June, 1947, with moderately advanced pulmonary tuberculosis. The treatment was bed rest only. He was readmitted in December, 1952, with far advanced pulmonary tuberculosis. The patient had no clinical symptoms. His sputum was positive on admission and became negative after three months treatment. He was given lavatory privileges and was put on a regime of DSM, grams one every other day for one month, then twice a week for three months, with PAS, grams twelve per day for the four months period. Then a course of INH, milligrams one hundred, three times a day, with PAS, grams twelve

per day, was given for 17 months. A segmental resection with thoracoplasty was performed in March and April, 1954. The patient will soon be ready for discharge.

Case 7. Colored male, age 35. This patient was admitted to the sanatorium in June, 1953, with the chief complaint of shortness of breath for the past three months. He was emaciated and looked chronically ill. Diagnosis was pulmonary tuberculosis, far advanced. He was put on a regime of DSM, grams one daily, with PAS, grams twelve daily, for one month; then, INH, milligrams one hundred, three times a day, with PAS, grams twelve a day, for six months. During the next three months he had bed rest only, which was followed by another course of INH, milligrams one hundred, three times a day, with PAS, grams twelve a day, for four months. The patient has gained 35 pounds of weight, and his disease is clearing. He may need surgery later.

Case 8. Colored male, age 52, hospitalized 18 months. This patient was admitted to the sanatorium in February, 1952, with the diagnosis of pleurisy with effusion, probably tuberculous. He was given DSM, grams one daily, with PAS, grams twelve daily, for one month. He continued on bed rest until two months later when he developed a diffuse miliary infiltration throughout both lung fields. His temperature was 103.8 degrees. The patient was given INH, milligrams one hundred, three times a day, for nine months, and his temperature became normal after one month. His sputum was positive on one occasion. The spinal fluid was normal. The patient then received a course of DSM, grams one twice a week, with PAS, grams twelve a day, for nine months. There was a weight gain of 26 pounds. There was almost complete clearing of the infiltration in the lungs. The patient was discharged in June, 1954.

Case 9. Colored female, age 12. This patient was admitted to the sanatorium in May, 1953, with the diagnosis of pulmonary tuberculosis, far advanced. She was very acutely ill. Her temperature was 101.6 degrees. The sputum was positive on admission but became negative after ten months of treatment. The patient was put on one-half the usual dose of DSM and PAS because she weighed only 70 pounds. She was put on strict bed rest and was given DSM, grams one-half daily, with PAS, grams six daily, for one month. Then she was given DSM, grams one-half twice a week, with PAS, grams six daily, for six months; followed by a course of INH, milligrams one hundred twice a day, with PAS, grams six daily, for three months. X-rays had shown a gradual clearing until this time when there was an increased infiltration. The patient was put back on DSM, grams one-half daily, with PAS, grams six daily, for three months. The x-ray again shows improvement. The patient is also receiving pneumoperitoneum. It is felt that a resection of the residual lesion in the right upper will be necessary when the disease becomes stabilized.

Case 10. White female, age 28, mild diabetic, hospitalized 17 months. This patient was admitted to the sanatorium in December, 1952, with the diagnosis of pulmonary tuberculosis, far advanced. She was very toxic and irrational part of the time. Her temperature was 103 degrees. She was having drenching night sweats and was coughing frequently. The sputum was positive on admission but became negative after eight months of treatment. The patient was given DSM, grams one every other day, with PAS, grams twelve daily, for two months. There was slight clinical improvement but no x-ray improvement. Then DSM, grams one twice a week, with PAS, grams twelve daily, was given for two months. There was only slight clinical improvement and no x-ray improvement. The patient was given INH, milligrams one hundred, three time a day, with PAS, grams twelve daily, for 13 months. For the first time the x-ray showed some clearing. The temperature did not come down to normal until June, 1953. The patient left the sanatorium against advice in May, 1954.

Case 11. White male, age 55, hospitalized 12 months. This patient was admitted to the sanatorium in July, 1952, with the diagnosis of pulmonary tuberculosis, far advanced. The sputum was positive. The patient was only chronically ill and had no complaints. He was given DSM, grams one every other day, with PAS, grams twelve daily, for two months. He developed tuberculous meningitis in spite of the DSM and PAS treatment and went into a coma September 6, 1952. The spinal fluid was negative for acid-fast bacilli. Diagnosis was made chiefly from physical examination and a low spinal sugar of twenty-five milligrams percent. The patient was put on a combination of DSM, PAS and INH daily until November when DSM was reduced to grams one twice a week. The patient had gradually improved until he was able to walk eight to ten steps at a time with help; however,

his mental faculties were impaired. All spinal fluid tests were normal in the meantime, with the exception of a sugar elevation of 36 to 40 milligrams percent and elevated protein. On March 30, 1953, the patient had a relapse of meningeal symptoms, and the spinal fluid revealed acid-fast bacilli for the first time. The pulmonary infiltration showed a gradual clearing; however, the patient died of meningitis on July 19, 1953.

Summary and Conclusions

1. It has been pointed out that there is still a shortage of sanatorium facilities in some areas.

2. Some of the effects of sanatorium care have been cited—the most important of which is gradual reduction of death rate since the beginning of the sanatorium movement.

3. With the modern weapons against tuberculosis, the sanatorium provides treatment as well as isolation.

4. The Waverly Hills Sanatorium program for the care of its patients has been outlined briefly.

5. Eleven illustrative cases were discussed to show the care the patient received while in the sanatorium.

The Lung Cancer Problem and The Research Program of The Tobacco Industry Research Committee*

ROBERT C. HOCKETT, Ph.D.**

New York, N. Y.

During the last year, cancer of the lung has been one of the outstanding topics for discussion among both physicians and laymen. Not only the medical literature but the popular press has been full of references to the subject. Debates have been frequent, not just in medical societies and on public platforms, but in beer-parlors, living-rooms, clubs, churches, railway trains and airplanes.

The reason for this increased concern, of course, is the reports linking lung cancer incidence statistically with cigarette smoking. The wide circulation of these reports during the past year, drew the attention of the public very suddenly and forcibly to cancer of the lung as a significant cause of death. At the same time these reports intensified the concern of the medical profession over the problem of lung cancer which, although not new, has been the subject of increasing study for some time.

Hospitals and practicing physicians over a wide area are reporting that bronchial carcinoma is seen much more frequently than it was 20 or 25 years ago. This direct experience is sustained by the statistical reports. The total number of deaths reported in the United States as due to respiratory cancer rose from 3,900 in 1930 to almost 27,000 in 1953, or about six-fold—remembering, however, that this figure includes all cancer of the respiratory system and not just lung cancer.

This numerical increase in lung cancer cases, naturally confronts the medical profession with an immediate practical need for improved methods of diagnosis and treatment. At present, the proportion of cases detected early is discouragingly small because of the lack of definite symptoms in the early stages. The proportion of durable cures provided by surgery is also reported to be discouragingly low. However, there are indications that improvement is possible and considerable progress has actually been made. Nevertheless, the difficulty of diagnosis and cure tends to increase emphasis upon prevention, and thus to concentrate attention upon the etiology of the disease. Our purpose tonight is mainly to consider this angle of the problem. Such consideration will involve the cigarette theory but will not be confined to it by any means.

In order to track down the "causative" factors more fully, it is necessary to take another look at the increase in reported cases of lung cancer. The figures stated above are merely totals and they must be subjected to several corrections in order to reveal their meaning.

Statistical Corrections

First of all there is the correction for general growth of the population. The population being much larger in 1953 than

*Read before the Louisville Society of Internists, Louisville, Kentucky, January 27, 1955.

**Associate Scientific Director Tobacco Industry Research Committee.

in 1930, will provide a considerably larger number of total cases of a great many diseases. Such a correction can be applied with relative ease.

The second most important correction that must be made is to allow for the aging of our population between 1930 and 1953. So many early deaths from pneumonia and other infectious diseases are now prevented by antibiotics and sulfa drugs, that an unprecedented number of persons are surviving to the ages at which cancer is more frequent—generally, over 50 years. Such an age adjustment also presents no particularly difficult problem to the statistician. He can estimate quite accurately how many lung cancer cases would occur if our present population had the same distribution of age groups as it had in 1930.

When such adjustments for growth and aging of the population are applied to the figures for *total* cancer deaths over the period from 1930 to 1953, it is found that a small but definite relative *decrease* in total cancer deaths has occurred during these 23 years. On the other hand, deaths from respiratory tract cancer still show an increase over this period. Only about one-half of the numerical increase can be accounted for by the growth and aging of the population.

A much more difficult problem is to determine how much of the reported increase in respiratory cancer is real and how much is due merely to more accurate diagnosis. It is a well-recognized fact among epidemiologists that increased publicity to a disease often produces a rise in the number of cases reported. In order to tackle the problem of prevention realistically, we need to know whether the growth in amount of lung cancer is like the *apparent* growth of a rock as it is gradually bared by a receding tide, or whether it is real growth like that of a tree.

Before 1900 primary carcinoma of the lung was rarely recorded among autopsy series. In 1896, Passler was able to collect only 96 cases from a broad survey of medical records. In 1912, Adler collected only 374 cases. Even at that date, however, he commented that failure to recognize lung cancer had contributed to the general view that it was rare. Pathologists of the era may have been influenced by Virchow's view that primary cancers are rarely encountered in these organs which are frequently involved by metastatic growths. Such a concept could have influenced their findings or interpretations of autopsy observations.

Dr. J. Marshall Neely has emphasized the influence of mental conditioning upon interpretation of autopsies. He says "A resident in pathology twenty-five years ago was taught that when carcinoma was found in the lung at autopsy it must be considered metastatic until proven otherwise. His responsibility was to comb the body until the primary tumor was found. At the present time when a resident in pathology encounters carcinoma in the lung he is apt to consider it primary until he can prove it metastatic. Other organs involved with tumor are then apt to be considered the seat of metastatics. Microscopic examination of tissues is not the final answer, except in special tumor types such as malignant nephroma, since there is no characteristic microscopic picture of primary carcinoma of the lung."

Since the turn of the century, the disease has been diagnosed more frequently and has been found as an increasing percentage of all cancers discovered at necropsy. This increase has been far from uniform in time or degree in various geographical areas. Because of the great lack of uniformity in method of observation and report, most authorities consider it unwise to draw from the older data any sweeping deductions concerning variation of the disease in the several ethnic and national groups or big geographical areas.

An element of uncertainty exists in the older statistical reports upon causes of death because of the practice of lumping *bronchogenic carcinoma* with cancers in many other sites. Only in 1930 were the *International Lists of Causes of Death* revised so that this disease would be separated from cancers in some 89 other minor sites and tabulated with cancer and other malignant tumors of the *other respiratory* organs. And since 1939 only, *bronchogenic carcinoma* has been separately identified in official statistics.

Nevertheless, in some countries particularly, the data that were collected in earlier years, are held to be sufficient for observing broad trends that provide a great deal of food for thought and hints for research.

Influence of Other Pulmonary Disease

Perhaps one of the most interesting questions that has been raised concerns the influence which the conquest of other pulmonary diseases may have exerted upon the diagnosis of lung cancer. Such dis-

eases are tuberculosis, influenza and pneumonia. Deaths from these three have declined tremendously during the last fifty years. Indeed the decline in mortality from infectious respiratory diseases is one of the outstanding public health achievements of the century, if not *the* outstanding one.

In passing, we may do well to note just how great this improvement has been. In 1900, the death rate from the three major respiratory diseases—tuberculosis of the lung, influenza and pneumonia—ran about 375 per 100,000 of population. In 1950—half a century later—the death rate from these three diseases plus cancer of the respiratory system was running 66.4 per 100,000—little more than one-sixth of the rate at the turn of the century.

It seems highly probable that many lung cancers of earlier years were complicated by onset of pneumonia before the cancer itself had produced any characteristic symptoms. In such cases death may often have been ascribed to the pneumonia without any recourse to autopsy in search of complicating factors. Since the development of antibiotics and sulfa drugs the respiratory infection is very likely to be resolved so that the patient will survive the pneumonia and live to provide a lung cancer diagnosis later.

A somewhat similar situation exists in the case of pulmonary tuberculosis. One autopsy series on lung cancer cases showed tuberculosis to be present in 10% of them. Conversely, autopsy series in the Sea View and Triboro Hospitals demonstrated lung cancer in 1.5% of tuberculosis cases. These studies at least show the coexistence of the two diseases. As to how often lung cancer may have been mistaken for tuberculosis in the past, we can only guess. However, Dr. Gilliam of the U. S. Public Health Service has pointed out that tuberculosis was formerly a quite common disease, very much more frequent indeed than lung cancer today. If only a *small* proportion of cases diagnosed as tuberculosis were actually lung cancer, a *large* numerical error would have been produced in the reported incidence of the latter disease. If, for example, as few as 2% of the deaths recorded in 1914 and in 1950 as pulmonary tuberculosis had actually been lung cancer, then the apparent increase (crude) in the latter disease among males would have been only about ten times instead of the actually reported thirty-five times. Dr. Gilliam is careful to point out that this is pure speculation, but the relationships and the possible consequences of relatively small errors in diagnosis are clear.

While speculating, however, I would like to go back to the 1900 death rates of 375 per 100,000 for respiratory diseases that did not include lung cancer. If one in 25 of these cases—or about four percent—had involved lung cancer, a disease not then even reported or recognized generally, the death rate would have been almost identical with the 14.3 per 100,000 reported in 1950 for all cancer of the respiratory system. This speculating is so intriguing—and so unprovable— that I hasten to say I will not dwell upon it.

Dr. Edward A. Lew of the Metropolitan Life Insurance Company has devoted a great deal of study to the statistical evidence for improved diagnosis as a factor in raising the reported cases of lung cancer. He points to the improved instruction and training of physicians in diagnosis, the development of radiology and bronchoscopy, the growth of hospital facilities, industrial medical services, routine chest x-rays and diagnostic thoracotomy. Sustaining his argument, he draws attention to the relatively great increase in *reported* lung cancer among non-whites, which very likely reflects the better medical services now available to this segment of the population. Dr. Lew finds that the respiratory cancer death rates (as reported) are clearly associated with the quantity and quality of medical facilities in various areas of the country. He concludes, however, that though the evidence of improved diagnosis is strong, it cannot be translated mathematically into proportions of the deaths now reported due to respiratory cancer which would formerly have been attributed to other diseases or to cancers in other sites.

The true moral of all this is that undue confidence cannot be placed upon data from the past but that improved data need to be acquired for the future so that these various uncertainties can be reduced. I shall refer to this need again later.

Consideration of Real Increase

It probably is not possible to draw any definite or quantitative conclusion as to just how much of the reported increase in lung cancer is due to improved diagnosis. A number, though not all, of the students of the subject have concluded that following application of all corrections, there is still a real increase in the incidence of primary bronchocarcinoma.

Some of the most convincing arguments advanced are as follows:

1. The increase is greater in males than in females. It can hardly be argued that diagnosis of men has improved more than the diagnosis of women.

2. There are differences in the rates of increase in lung cancer in the different age groups. This is also difficult to attribute to improved diagnosis.

3. The reported cases of lung cancer have continued to increase during the last five years. It is held that diagnosis has hardly improved that much in the same period, yet this may be largely a matter of opinion since it is hard to estimate the effect of widespread discussion and publicity on reporting of such cases.

A good deal of emphasis has been placed in the recent reports upon the remarkable difference between the two sexes in their lung cancer experience. Among white males the number of deaths reported as due to respiratory cancer rose about sevenfold between 1930 and 1953. Among white females the corresponding increase was somewhat less than threefold, even though the rate for females was much lower than for males, even in 1930. Whereas the sex difference was about 2¼ times in 1930, it had become 4½ times in 1950.

To summarize the etiological problem to this point, it can be said: First, that some (unknown) part of the increase in lung cancer cases is generally attributed to real rise in incidence; and secondly, that the disease is much more frequent in men than in women.

As a working hypothesis, it has been postulated by many investigators that there may be some new carcinogenic factor in the environment to the action of which we have been subjected increasingly during the last three or four decades. Search for such a factor, or factors, had been under way for a long time before the cigarette theory received so much publicity.

If there is such a relatively new factor, or group of factors, in the environment, the sex difference in lung cancer rates could be explained in at least two ways. It could be assumed that the factor is one with which men come into contact more frequently than women. It could also be assumed that there is a basic difference in the response of men and women to such an environmental factor because, for example, of some effect of the hormones. A satisfactory theory, of course, must tie together all the observed facts.

There are a great many candidates for suspicion as relatively new factors in the environment that might possess carcinogenic effects. Many of them are products or by-products of particular industries. Some of them are likely to come into contact principally with workers in the factories or mines that handle carcinogenic materials. Others go into the general atmosphere and might affect the inhabitants of a whole area.

It cannot be assumed that all such possible carcinogenic agents are acquired by inhalation. There is evidence to indicate that agents applied elsewhere to the body may produce tumors in the lung. It is known, for example, that urethane applied elsewhere to the body can elicit pulmonary cancer in susceptible mice. It is not impossible to conceive that an agent producing lung tumors in men might enter the body through the stomach or the soles of the feet. Nevertheless, agents that pollute the air arouse the most suspicion as being involved in lung cancer etiology.

Some of the industrial hazards have been relatively easy to demonstrate by methods of statistical correlation. Workers who constantly are exposed to compounds of arsenic, chromium, nickel and beryllium, carbon black, radioactive ores, coal tar and soot, isopropyl alcohol, asbestos and vapors or mists of petroleum derivatives do very definitely show an increased incidence of cancer. All the agents listed are either recognized or strongly suspected of responsibility for producing malignancies. All of them are candidates for suspicion as inciters of lung cancer.

It is not difficult to explain why lung cancers of such definitely occupational origin should occur more frequently in men than in women since occupations involving exposures to these particular agents are much more frequently occupied by male workers. Some fraction of the total male lung cancer is certainly to be attributed to such specific occupational exposure but nobody knows as yet just what fraction. There is also a definite possibility that some such occupational hazards have not yet been recognized.

Besides such specific exposures, there is the much more difficult problem of general atmospheric pollution over wide areas. Hydrocarbons from the incomplete combustion of domestic and industrial fuels, the exhaust of engines, dust from the wear of thousands of tires on streets

and highways, asphalt from roads and boulevards, arsenic compounds from insecticides and burned coal, not to mention radioactive substances either from natural sources or from atomic explosions —all these contaminate the air of whole cities and often of the surrounding country. Many of these agents have been shown to induce cancers in experimental animals; that is to say, many of these substances have been shown to possess carcinogenic properties of one kind or another.

It is very difficult, however, to determine just what effects these air pollutants have in producing pulmonary cancers in man. Statistical approach to the problem is limited because of the great numbers of people who are exposed to these materials in varying degrees, and for different periods in time.

Rural - Urban Differences

In a general sort of way it has been shown by many researchers that there is more lung cancer in cities than in the country. This suggests, of course, though it does not prove, that the contaminated air of cities is one factor. Stocks has shown the city-country relationship quite clearly in Britain. Quite recently, Mancuso has published striking figures for the relative cancer mortality ratios in various Ohio counties. Eight metropolitan counties (91% urban) showed a significant surplus of observed over expected deaths as calculated from the rate for the State as a whole (123/100). Seven other "urban" counties (66.2% urban) showed a significant deficit in lung cancer deaths on the basis of expectation (82/100). The remaining rural counties (41.4% urban) showed a still greater deficit (69/100). It is notable that a similar relation existed also for cancer of nearly all other bodily sites, as well as for cancer of the respiratory tracts.

Mancuso also showed that the most highly educated twenty percent of persons in the Cleveland area showed far less than the expected number of deaths from cancer of the lung while the least educated twenty percent showed very many more than the expected rate. The same kind of relationship held between income level and lung cancer. According to the Baltimore City Health Department studies in that city, lung cancer mortality for the age group 45-64 years is found to vary consistently and inversely with socio-economic class. Thus the lung cancer mortality rate for this age group, both sexes included, is approximately twice as great in the lowest socio-economic fifth of the population as is found in the highest socio-economic fifth.

I suppose hardly anyone will claim that going to college or earning a big salary will, of itself, immunize a man against cancer. It seems much more probable that highly educated and high-salaried persons are to be found working at white-collar jobs where exposure to dusts, fumes, industrial wastes, dirt and smoke is less than that encountered by laborers.

The theory that cigarette smoking is a predominant factor in lung cancer etiology is now so well known that it is hardly necessary to detail the observations that gave rise to it. Very briefy, the evidences cited in support of the hypothesis are these:

1. There is a parallel between the increase in cigarette consumption and the increase in lung cancer during the last thirty years.

2. There has been shown to be a mathematically significant higher number of cigarette smokers among male victims of pulmonary cancer than among "control" groups without lung cancer.

3. Similarly, the statistical frequency of lung cancer cases has been reported to increase in relation to the number of cigarettes smoked daily.

4. The sex difference in liability to lung cancer is said to correspond to the greater consumption of cigarettes by men and the longer period during which men have been smoking.

5. The difference between lung cancer mortality in city and country areas is attributed to the heavier cigarette smoking of city people.

These evidences have been publicized so thoroughly that they can be assumed to be familiar. Perhaps less familiar are some of the questions and difficulties that have arisen concerning this evidence.

The matter of the sex-ratio gives some trouble. The male to female sex ratio fluctuates in various places from 2:1 to 20:1 or even 50:1. In general, however, the prevalence among males has become even more pronounced with the years. The question has been raised as to how this observation can be reconciled with the fact that women have certainly been increasing their smoking rates much faster than men for a full generation. It would seem that the gap between male and female incidence should

be tending to narrow if cigarette smoking is a major factor.

In Turkey, where cigarettes were invented more than a century ago and women have smoked heavily far longer than in Western Europe, the male-to-female ratio has nevertheless increased from 6:1 to 8:1. The sex ratio, in fact, varies widely from country to country and from section to section. "It is scarcely reasonable to assume," Dr. Hueper declares, "that such variations reflect mainly local differences in smoking habits between the sexes."

Comparisons of statistics between one country and another, or one city and another, also raise difficulties. Dr. Sidney Russ has pointed out that the lung cancer death rates are very similar for the United States, Denmark and Switzerland. Yet, the Swiss and Danes smoke only half as many cigarettes as we do. On the other hand, the English and Welsh smoke only seventy percent as many cigarettes per capita as we do but their lung cancer mortality is considerably more than twice as great.

Neither Kreyberg in Norway nor Denk in Austria could find the sort of relations between lung cancer and cigarette smoking reported by American and English investigators.

Dr. Hueper has pointed out that there is a large difference in the lung cancer rates in various pairs of cities of comparable size such as Baton Rouge and Atlanta. Is it reasonable, he asks, to believe that there is a pronounced difference in the cigarette smoking habits among the citizens of these two cities? Is it not more logical to assume that there is a combination of factors involved in which smoking is possibly one, but only one.

Dr. Hueper also points out that the lung cancer increases became apparent very early in the century whereas cigarette smoking did not begin to become really prevalent until the period of the first World War.

The virtual *lack* of association between lung cancer incidence and the smoking of cigars and pipe also presents a problem for interpretation. A number of speculative possible explanations for the difference in effect of cigarettes, cigars and pipes have been put forward but they are all conjectural. They certainly are subject to experimental confirmatiin.

Carcinogens

Naturally, there have been a number of efforts to find some experimental basis for explaining the statistical association between cigarette smoking and lung cancer. Scientists have tried to determine whether tobacco smoke or "tars" are carcinogenic when applied to animals. In some cases such tars have been painted on the skin of mice. In other cases animals have been made to inhale the smoke of cigarettes. Most of the skin painting experiments have shown negative results and many of them were never even reported in the literature. Negative experiments often are not.

Wynder and Graham were able to get skin cancers in 36 out of 81 mice*. These were, however, mice of the CAF-1 strain which were bred for supersensitivity to carcinogens. Such supersensitive mice can even be given cancer by the administration of olive oil and glucose which certainly are not considered dangerous in the least to humans. The significance of this work is, therefore, very hard to translate into terms of human experience. Tobacco tar shows up in such experiments as extremely low in carcinogenicity as compared with such things as coal tar. If the former were anywhere nearly as powerful carcinogen as coal tar, we would certainly expect to find a large amount of cancer of the fingers, lips and tongue of smokers. There is a singular lack of any such direct medical evidence which would point to a carcinogenicity of tobacco tars to man.

There have also been many efforts to isolate out of cigarette smoke some substance known to be a carcinogen. Certain polycyclic hydrocarbons such as 3,4 benzpyrene, methylcholanthrene, 1,2,5,6-dibenzanthracene and others are well known to have the power to induce skin cancers. Tars made by burning cigarettes have been subjected to the sensitive modern methods of fractionation and analysis including chromatographic separation and ultraviolet spectrophotometry. Such modern methods are so sensitive that we would expect to find detectable traces of such hydrocarbons in almost any incompletely burned organic material, including oak leaves and waste paper. One or two reports of the detection of such hydrocarbons in cigarette smoke or the smoke from burning cigarette paper have been issued. Nevertheless, the meaning of these

*In April, 1955, Wynder and collaborators reported further results from painting mouse skin with tobacco tars as follows: "Among Swiss mice, 22 papillomas and 12 cancers were noted among 86 mice. The respective results for C57 mice were ten papillomas and two cancers among 89 mice, whereas those previously reported for CAF 1 mice were 48 and 36 out of 81 mice."

reported detections is far from clear. The amounts reported are much smaller than those present in the air under smoggy conditions. Even if they are confirmed, their true significance in relation to the lung cancer problem will be far from clear.**

There is also a difficult problem in the duplication of normal burning conditions of cigarettes in the laboratory machines that have been set up to produce smokes and tars for analysis or for animal experiment. At first it was not generally appreciated how much the conditions of burning could affect the products of combustion. When a person smokes a cigarette, he does not draw continuously upon it as some of the machines do. He takes an occasional puff. While he is drawing, the temperature of the burning tip rises temporarily and then falls again during the interval before the next puff. It has been shown repeatedly that the frequency of the puffs, the volume of air drawn through the cigarette during a puff, the duration of the puff, and the length of the butt thrown away, all exert a marked effect upon the amount of smoke and tar produced and the quantities of the various substances found in the smoke and tar.

Research Master Plan

To aid in the quest for definitive answers in a great field of inquiry where the evidence still permits no final conclusions, the Scientific Advisory Board to the Tobacco Industry Research Committee adopted a kind of master plan. All the research is to be conducted by independent scientists, most of them affiliated with major medical centers and laboratories, under grants of support recommended by the Board. Members of the Board coordinate the various projects, so that each takes its place in the larger pattern of inquiry.

One phase of the work is concerned with the study of tissue changes. Twelve major medical centers will focus on the examination of human lung tissue at autopsy to determine the sites and time of beginning of carcinoma. This study in a dozen medical centers will permit comparison of cancer frequency in the various geographic areas, and will also produce needed data on the occupational history, habits, and living environment of the patients.

As another approach to the same problem, researchers will study what changes, if any, occur in different animal and human tissues when the tissues are subjected to the presence of tobacco derivatives, tobacco smoke, and other substances. The tissues in which the Scientific Advisory Board is interested include not only the lungs, but also the mouth, larynx, endocrine and other glands, heart, circulatory system, nervous system, kidney, and viscera. Studies of lung tissue will be made in living man and animals, to parallel studies of malignant changes in tissues conducted under laboratory conditions. Carefully planned experiments will be conducted with mammals, under completely controlled conditions, to discover the effect of smoke on lungs and other organs. Other projects will test the effect of identified smoke tars on the tissues of animals, under careful controls.

In another phase of the work, a study will be made of the habits and characteristics of smokers in various parts of the country. Particular attention will be paid to the individual characteristics of the smokers, including their emotional drives, habits, age, sex, environment, and smoking histories. Inquiry will be made into any relationships that may exist between smoking and the glandular and nervous systems of the smokers.

In addition there will be such studies as are necessary of the physical and chemical composition of tobacco, of additives used in treating tobacco, and of the cigarette wrapper, as well as the products of their combustion. Sources will be developed for providing a continuous supply of tobacco smoke and tobacco derivatives, secured under controlled conditions for use in experiments. Efforts will be made to duplicate the mechanism of human smoking in machines, as a part of this work. The majority of the projects authorized to date are related to the cancer problem in one way or another, but several concern the cardiovascular system, chest physiology, or other subjects.

Everyone concerned is fully aware of the fact that the program is a long-term undertaking, and will be supported as such by the Tobacco Industry Research Committee. Whatever the final research outcome, the public is bound to benefit.

**Subsequent to delivery of this paper, Wright and Wynder reported that, "the concentration in which benzpyrene seems to be in cigarette tar is insufficient to account for the observed carcinogenic activity to mouse epidermis."

Low-Back Pain And Its Related Conditions—Particularly The Lumbar Disc*

MILTON C. COBEY, M.D., F.A.C.S.
Washington, D. C.

In orthopedic surgery and in medicine in general the complaint of backache has for many years been associated with a catch-word. In the 1920's and 30's the word "sacro-iliac" was used to describe low-back pain. This word covered a multitude of conditions, and it took many years of patient research and study to differentiate many conditions in the low-back which can produce the pain that was referred to as sacro-iliac disease. Now, individuals with backache and with or without sciatic radiation of pain are put into a large group called "ruptured discs."

In a study carried out and published by the Mayo Clinic[1] in 1952, only 22 percent of all the conditions known as back pain were actually caused by a ruptured intervertebral disc, while some 78 percent of the causes of back pain were of other origin. It is up to us as physicians to try to differentiate the causes of back pain. The surgery for the ruptured intervertebral disc has met with varying success. Those with large herniations of the nucleus pulposus through a definite aperture of the annular ligament, pressing on either the cord in the center, or one of the nerve roots laterally, produce radicular pain. The removal of these brings about a dramatic relief. However, these are not the common cases seen or operated upon. There are those cases with an indistinct rupture or bulge of the annular ligament which may result in only temporary relief, or no relief even after four or six months' convalescence following surgery. Therefore, if the ruptured intervertebral disc is properly placed in its numerical percentage and in its clinical position, the other more common causes of back pain can first be considered and the patient often relieved by less heroic methods than the operation for a ruptured intervertebral disc.

Postural Backache

The most common cause of backache is poor posture. Poor posture may occur in the housewife with her tendency toward obesity and lordosis and her persistent use of high heels; the office worker with his relaxed abdominal musculature and lack of normal physical exercise to keep his posture correct; or, less commonly, in the laborer and those who do hard work. Posture, alone, contributes to 60 percent of back pain from the orthopedic standpoint, and 40 percent from the general medical standpoint. The person who has poor posture allows the pelvis to roll forward, the abdomen to protrude, the normal dorsal kyphotic curve to increase, as well as the cervical lordotic curve, putting the head in a forward chin-leading position. We often think of this individual as standing on his ligaments, instead of his bones being balanced by normal musculature. He permits contracture of the lumbosacral fascia, allowing the abdomen to protrude more and more, soon loses that fine athletic touch of youth and no longer can touch the floor with his hands and sometimes can not even touch his knees. For proper posture one should have a figure such that a plumb-line dropped from the ear lobe would pass through the point of the shoulder, the greater trochanter just at the femoral condyles and touch the floor at the proximal end of the fifth metatarsal bone, with a reasonably equal amount of the body on either side. He will stand with the pelvis level from both the sagittal and coronal planes so as not to develop contracture of the lumbosacral fascia or hamstring musculature.

Contracture of the piriformis muscles, as first described by Dr. Freiberg[2], produces sciatic pain and is entirely of a postural nature. The individual who often stands on one leg, such as the clerk in the store, the school teacher, or the surgeon, develops a contracture of the tensor fascia femoris and the piriformis muscle on the non-weightbearing side. The weight-bearing leg is in adduction; the non-weight-bearing leg is in abduction. This contracture on the non-weightbearing leg will produce sciatic pain because half of the sciatic nerve often passes through the belly of the piriformis muscle and this contracture pinches the nerve directly, producing true sciatic symptoms which are often impossible to differentiate from a

*Read before the General Assembly of the Kentucky State Medical Association at its Annual Meeting, Columbia Auditorium, Louisville, September 21-23, 1954.

ruptured intervertebral disc except on rectal examination and palpation of the piriformis muscle itself. Associated with the piriformis contracture there is often contracture of the tensor fascia lata, as described by Dr. Ober[3], which will produce the same pattern of symptoms. Both conditions are relieved by stretching and physiotherapy, or by surgically incising the tendon insertion of the muscle.

Spine Pathology

Pathological changes in the spine next most commonly produce low-back pain and are often associated with sciatic pain. These are first, arthritis or spondylitis, perhaps similar to the severe Marie-Strumpell arthritis, with calcification of the intraspinous ligaments and eventual ankylosis of the spine, and/or the shoulders or hip joints. Second, the proliferative type of arthritis (osteoarthritis, or hypertrophic), which involves not only the production of spurs or osteophytes from the bodies of the vertebrae, but also from the facets themselves. The facets are not as often considered as is damage to the intervertebral disc, but one must remember that all actual motion is carried out through the facets. These joints will develop traumatic osteoarthritis from repeated injury, and spurs or osteophytes will press on the nerve roots. The nerve roots pass directly underneath these facets in every instance and the spurs grow out from the facet. They are not often visible in x-rays except in very excellent oblique views, which show their pressure on the nerve roots. In like manner, degeneration of the intervertebral space with narrowing and destruction of the disc without protrusion can sufficiently alter the opposing spaces of the facets so that root pressure may be produced without marked osteophytosis. Figure 1. Age or previous injury will cause degeneration of the intervertebral space and settling of the vertebral bodies so that the narrowed interbody space will produce facet pressure on the nerve root. Thickening of the intralaminal ligament or yellow ligament may produce nerve-root pressure or it may be mechanically produced by subluxated facets. Congenitally abnormal facets, that is, facets not in the same plane but in opposite planes in the same vertebrae, when forced to move through abnormal motion will sprain the capsule or tear the capsule of these joints. This rupture of the capsule will produce hemorrhage inside the joint of the facet, as will occur in any sprained ankle or other joint injury. This temporary distention of the joint with synovial fluid or blood can in itself produce sufficient nerve-root pressure to give painful sciatica which may last over a period of weeks.

Sciatic Pain

Diseases of the dorso-lumbar area[4], such as osteomyelitis, osteoporosis, bone tumors, or rupture of the aponeurosis of the muscle organs for the internal oblique, or quadratus lumborum muscles will produce referred sciatic pain along the nerve trunks arising from the mid-back area. The so-called Herz tumor[5], which is a rupture of the superficial layer of the deep fascia in the lumbosacral aponeurosis, will again produce referred pain into the buttocks which may be misinterpreted as sciatic pain. Pathological conditions not associated with the spine, such as tumors in the form of osteolytic sarcoma, or osteochondromas with large exostoses in the pelvis or about the trochanteric areas of the hips can produce sciatic pain. Childhood lesions, such as epiphysitis of the spine producing lumbar lordosis and dorsal kyphosis, bring about poor posture, causing backache and occasionally, sciatica. A loss of the normal curves of the spine, cupping of the intervertebral bodies, and a localized dorso-

Fig. 1—Osteoarthritis With Narrowing of the Intervertebral Spase.

lumbar kyphos, can so change the mechanics of the postural spine that there is para vertebral muscle spasm with radicular distribution of pain along the sciatic course. These may be associated with some deformity of the intrathecal canal so that Pantopaque studies may give a misleading positive diagnosis of defects about the intervertebral disc. Confusing results and misinterpretations of this rather excellent adjunct to the diagnosing of ruptured intervertebral disc, the myelogram, are possible due to the many deformities and causes of sciatic pain already mentioned.

Ruptured Disc

When there is such a thing as a ruptured intervertebral disc it does not rupture without some predisposing cause. This cause can conceivably be strain, as a result of stooping and lifting, without any congenital abnormality of the bony structure of the spine. However, in reality, careful study reveals some congenital abnormality or some traumatic abnormality to cause this tremendously thick and powerful annular ligament, containing the disc material in its center, to become weakened, degenerative, and eventually rupture. This permits the passage of the disc material either into the area covered by the spinal cord and its nerve roots, or laterally or anteriorly, where it does not produce symptoms. The following conditions and many others not mentioned, may be present with the ruptured intervertebral disc. For example, at operation, such things as osteochondritis dissecans[6], or the joint mouse, have been found. This wedges between the joint surfaces as it would in the knee or any other joint. Congenital inequality of the facets, or the joints of the same vertebra being placed in the opposite planes, one sagittal and the other coronal, repeatedly subjects these joints and the disc space to strain. Also, following the rupture of the intervertebral disc and the lack of strength now present in the annular ligament, the rest of the disc material can continue to squeeze through and more and more will be extruded through the opening. In like manner, following disc surgery, more material may die and be extruded through the same opening, with a recurrence of symptoms. Such other congenital defects as spondylolisthesis, which is a congenital lack of fusion of the pedicles of the vertebrae at their isthmi—and this spondylolisthesis may be either unilateral or bilateral, and may involve one or two vertebrae[7]—may give rise to instability associated with the ruptured intervertebral disc. Also, the transitional 6th, Figure 2, and the sacralized 5th lumbar vertebra, produce the unstable lumbosacral spine. It is therefore important, to perform a lumbosacral fusion, or a fusion between the two vertebrae from which the disc has been removed at surgery. Recurrence of the sciatic pain in from four months to five years has been reported in sufficient surveys[8], to indicate that spinal fusion should be done either at the time of the disc surgery, or a week or two later. In the spine in which no demonstrable bony deformity can be seen along with the damaged disc, either by inspection at operation or by x-ray, I believe it is good judgment not to do the fusion, but when there is any question, I believe the spinal fusion would be the more satisfactory operation. Because there is a three to four months invalidism of the patient following just a simple removal of the disc in most cases, a fusion does not particularly prolong this period. It certainly gives a more excellent chance of complete cure, and a prevention of recurrence of symptoms.

(Continued on page 805)

Fig. 2—Sixth Lumbar Vertebra, With Transitional Fifth Lumbar.

CASE DISCUSSIONS

FROM THE LOUISVILLE GENERAL HOSPITAL

Arthritis in a 54 Year Old Male

Case presented by the Department of Medicine

CHIEF COMPLAINT: "My joints are so sore and stiff I can hardly move."

PRESENT ILLNESS: In the summer of 1947 this miner noticed generalized stiffness on arising each morning. As the day progressed he would improve. Later the stiffness progressively became worse with the development of swelling of symmetrical joints of the hands, knees, ankle and heels. Subcutaneous nodules appeared on extensor surfaces of forearms. A diagnosis of rheumatoid arthritis was made, and he was given gold injection for five or six months with improvement. The patient stopped the injections of his own accord.

In the fall of 1948 he was hospitalized in Rehabilitation Center, Washington, D. C., for physical therapy. One year later he was transferred to California, where he remained for 11 months. During this time he was placed on cortisone with considerable improvement. In the latter part of 1950, he returned home at his own request and has remained in Eastern Kentucky since then. He continued to take cortisone in a dose of 100-150 mgm daily.

In May, 1955, he began to have fever sometimes as high as 103. The musculoskeletal symptoms became worse and the patient was hospitalized.

PHYSICAL EXAMINATION: On admission there was typical ulnar deviation of both hands with moderate swelling of the proximal interphalangeal joints, moderate flexion contractures of all fingers and of both elbows, and scattered subcutaneous nodules were palpated on the extensor surfaces of the forearms. There was an effusion in both knees and two plus edema of both ankles. The liver was enlarged, extending 4 cm below the right costal margin, and the spleen was barely palpable. No adenopathy was present. There were scattered purpuric areas on the dorsum of both hands. The cardiovascular system appeared normal.

LABORATORY STUDIES: The abnormal findings were a moderate anemia, leukopenia and thrombocytopenia. The albumin-globulin ratio was reversed, the albumin being 2.4 mgm/100ml. and the globulin 4.8 mgm/100ml. A lupus erythematosus cell preparation revealed many L. E. cells. Urinalysis showed two plus albumin, 1-5 RBC per field, and 2-7 WBC per field.

X-RAY: Showed marked demineralization of all bones with narrowing of the joint spaces of the fingers and scattered punched-out areas of decreased density along the articular surfaces.

Discussion

ROBERT L. MCCLENDON, M. D.,
Chief of Section on Rheumatic Diseases:

A typical case of rheumatoid arthritis with symmetrical progressive joint disease offers little difficulty in diagnosis. The presence of subcutaneous nodules further substantiates this diagnosis. The course of rheumatoid arthritis usually runs over a period of years. The progress of the disease may be interrupted temporarily or permanently at any stage so we must not consider any patient beyond aid. About 15% of patients with rheumatoid arthritis undergo remission without any therapy and this partially accounts for the hundreds of nostrums advertised as cures for arthritis. In this patient, however, the course was progressive, and it is of particular interest that after four years of large doses of cortisone he developed a positive lupus erythematosus cell reaction. Dr. Sanneman, what is the L. E. cell reaction and what does it mean?

EVERETT H. SANNEMAN, JR., M. D.
Instructor of Medicine

The L. E. cell reaction as commonly performed, is an in-vitro phenomenon most commonly observed in patients with acute disseminated lupus erythematosus. The plasma, serum or fluid from a serous effusion from the patient is allowed to stand for a period of time in contact with a preparation of freshly drawn white blood cells from either the peripheral blood or bone marrow. The characteristic L. E. cell is a mature neutrophil which may take part in either the degenerative phase or the phagocytic phase of the L. E. cell phenomenon. What is generally observed is degenerated nuclear material from one neu-

trophil being phagocytized by one or more other neutrophils. It is known now that virtually all of the other forms of leucocytes may take part in this phenomenon; these include eosinophils, basophils, monocytes, lymphocytes and plasma cells.

The L. E. cell test is positive in nearly all cases of disseminated lupus erythematosus. Occasional positive reactions have been seen in rheumatoid arthritis, scleroderma, Hodgkin's disease, following penicillin reactions in hemolytic anemia, and in drug reactions following the administration of apresoline and butazolidin. We must conclude that the phenomenon is not entirely specific for lupus erythematosus.

Question: What drugs are of proven value in the treatment of rheumatoid arthritis?

DR. MCCLENDON: Salicylates in many forms have stood the test of time. Gold salts have been used and most rheumatologists believe they have a distinct place in the treatment of rheumatoid arthritis. Steroids, cortisone, hydrocortisone and ACTH have been very helpful, and now we have prednisone and prednisolone, whose common trade names are Meticorten, Deltra and Meticortelone. These latter drugs are some four or five times as potent as cortisone and hydrocortisone and may replace them.

Question: What are the advantages and disadvantages of prednisone over cortisone and hydrocortisone, Dr. Neustadt?

DAVID NEUSTADT, M. D.
Instructor in Medicine

Prednisone is four to five times as potent mgm for mgm as the older steroids. It has little or no effect in usual dosage on sodium, potassium and nitrogen balance. However, the incidence of peptic ulcer and disturbance of carbohydrate and lipid metabolism appear higher than with the older steroids.

Question: Did the long term cortisone therapy adversely affect the rheumatoid arthritis?

DR. MCCLENDON: The answer is not known. We have seen destructive joint changes continue in spite of control of symptoms. At the last meeting of the American Rheumatism Association, Howard F. Polley, M. D., of the Mayo Clinic, presented many interesting cases of typical rheumatoid arthritis where, after prolonged cortisone therapy, the patients developed chronic hypercortisonism which simulated L. E. or periarteritis nodosa. This should be sufficient warning not to employ large doses of these steroids in the long term treatment of rheumatoid arthritis.

Summary

A case history of typical rheumatoid arthritis lasting for several years, later developings findings suggestive of disseminated lupus erythematosus, is presented.

Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes aud bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

All scientific material appearing in the Journal is reviewed by the Board of Consultants on Scientific Articles. If illustrations are submitted with a paper, the Journal will assume the cost for the first three one-column width half tones. The cost of additional illustrations will be borne by the essayist.

Arrangements for reprints of an article should be made directly with the publisher of the Journal, Mr. J. G. Denhardt, Times-Journal Publishing Company, Bowling Green, Kentucky.

Please mail your scientific articles to the Journal of the Kentucky State Medical Association, 620 South Third Street, Louisville 2, Kentucky.

SPECIAL ARTICLES

THE BETTER TO SEE

One week before the Annual Meeting of the Kentucky State Medical Association convenes, a large van will roll up to the freight entrance of the Louisville General Hospital. Shortly thereafter, on the operating room floor, ten men will create a scene of hurried activity, mass movement and—to the causal observer— no little confusion. Disconcerting as this picture may appear, some six hours later all would be relatively tranquil and understandable. In what was formerly an operating room, a hospital visitor would now behold a small scale television studio, complete with lights, backdrops, cables and cameras.

"Why a television studio in a hospital?" A physician acquainted with the exploits of medical television might well reply, "Why not?" Certainly there is ample justification for both the question and the answer. The sight of a TV studio anywhere conjures up an image of professional performers, high pressure entertainment and—commercials! While true of TV as most people know it, few would pretend that such a description does complete justice to the medium.

At best, television can present an excellent program to a vast audience, yet give virtually every viewer a "front seat" picture of the proceedings. In many instances, it can show "close-ups" that still further improve the viewer's position. The studio camera brings tremendous versatility to the medium. With two more cameras at a director's disposal, he can move from one subject to another with relative ease and in a minimum of time, yet still provide complete coverage through a variety of shots taken at different lens ranges. Finally, in this age of "seeing is believing," television allows—even demands—the utilization of visual aids. Such materials as charts, models and diagrams aid the speaker immeasurably in reinforcing his key points.

Here, then, is an instrument of great potential for education. One cardinal ingredient for medical instruction, however, has been absent from our discussion. The ingredient is, of course, color. Lacking color, subtle but highly essential medical material such as tissue differentiation, areas of infection, localization of vital arteries and veins, and the extent of circulation cannot be clearly represented. Probably the greatest single difficulty is the fact that red is almost invisible in black-and-white reproduction.

Smith, Kline and French Laboratories, a Philadelphia pharmaceutical firm, after presenting one black-and-white program in 1948, recognized that the limitations of a monochrome medium were severe enough to prevent its complete acceptance by the medical profession. Color television was the only answer. Taking the initiative, S.K.F. contacted the Columbia Broadcasting System whose experimental work in the field was known. C.B.S. said it was possible to custom build a portable camera for televising surgery, camera chain and enough receivers to accommodate 1000 persons. S.K.F. placed the order and at the Annual Meeting of the American Medical Association in 1949, presented the first showing of color television.

Now, more than six years later, medical color television has compiled a remarkable record of achievement. While the medium is still a thing of the future for the lay public, the medical profession has viewed from 100 to 200 hours of color TV every year since 1949. Nor has Smith, Kline and French, which sponsors and produces all color telecasting at medical meetings, confined the use of its postgraduate teaching aid to the United States. In 1951, S.K.F. presented the first showing of the color medium in Canada, after which Europe had its first look at color TV in an S.K.F. program for the International Society of Surgeons meeting in Paris. All told, more than 372,000 doctor-visits have been paid to colorcasts at 75 medical meetings.

The reasons for the outstanding success of color TV are many. Probably its greatest contribution to date has been reversing the trend of surgical instruction. Over the years, more and more individuals have been added to the operating team. As a consequence, fewer and fewer students have been able to observe surgery from an amphitheater seat. A medical student (not necessarily typical) summed up the

situation this way, "The amphitheater is the only place where we have a chance to catch up on our reading." In one giant step, the surgical TV camera has rendered this comment obsolete. From a position directly over the operating field, the camera's electronic eye gains a vantage point better than that available to most members of the operating team. In case of the S.K.F. colorcasts, it transmits a picture to a special projection-type receiver equipped with a 4½ by 6 foot screen. The screen will be located in the Columbia Auditorium during the Kentucky State meeting. There, more than 500 physicians will watch operations that have all the immediacy and realism of those seen from an amphitheater with the added advantages of close proximity and convenience for the viewer. In effect, the addition of one more "spectator" in the operating room has made it possible for many hundreds to see.

The development of production techniques avails to the various specialists a variety of effective means for the presentation of methods and procedures. For example, a surgeon may choose to give a straight running narrative as he operates, carry on a question and answer discussion with other surgeons watching the operation on a monitor located in the studio, or switch periodically to an assistant in the studio who discusses and demonstrates clinical material pertinent to the operation.

The teaching clinic is another area which color TV has benefited. As yet, there are a very few permanent studio installations in those hospitals that now have color TV facilities. The televising of clinics requires considerably more preparation, time, equipment and manpower than does the televising of surgery. Nevertheless, as costs become lower and needs greater, the time eventually will come when medical schools and their affiliated hospitals will consider color TV as a realistic alternative to radically revised teaching programs.

Clinical lecturers have been faced with a three-cornered predicament. While attempting to show the most pertinent clinical material available, no matter how large or small the various items might be, they are obliged to demonstrate this material with the greatest possible visual clarity. Finally, they must reach a large audience without losing effectiveness. Before a class or medical gathering of any size, the limitations imposed on the lecturer by platform space, distance from his audience and sheer convenience usually preclude his presenting the complete clinical picture.

With televised teaching clinics, it becomes relatively easy to cover a wide range of clinical material, increase the number of students watching any single clinic and still provide every student with an excellent view of whatever is being demonstrated. Here the ability of television to make the very small very large is supplemented by the lack of distraction in the picture seen, allowing the audience to concentrate its entire attention on the subject matter under discussion.

Scheduled well over a year ago, the color telecasts for the Annual Meeting have been in preparation for many months. Naturally, the tempo will pick up markedly about one week previous to the program and move along at an accelerated pace right up to the dimming of the house lights in the auditorium. Eight hours of operative procedures and clinical demonstrations will be shown to Kentucky physicians, time enough that they might judge for themselves the value of medical color television to the present and future of medical education.

EDITORIALS

CRITICISM OF THE MEDICAL PROFESSION

For many years the medical profession has been one which was revered, and the medical man the man of importance in his community; now he is criticised on every hand, not only by the laity, but by physicians themselves in medical publications, medical meetings, lay publications, newspapers, and magazines.

I feel that we of the medical profession are carrying our efforts a little far to the left in an effort to improve so-called public relations. Certainly a generalized denouncement and criticism of our profession is out of place. None of these approaches have improved our lot with the lay public, our patients, and they will not do so. A return to a more personal contact with our patients, a genuine show of interest on our part in them personally, not only as patients but as individuals, an adequate follow-up by phone or letter after we have seen them in the office or home to assure them of our continued interest is of first importance. Seeing patients by appointment, making these appointments stick, taking our own histories, doing our own physicals and spending more time with our patients, not shunting them too much from one room to another for various procedures by a technician or nurse, but giving to them more of ourselves will make for goodwill.

We should avoid trying to do more work than we can do comfortably. There is an old aphorism "Doctor, heal thyself," and such a saying is now most appropriate.

There should be a common ground of understanding between the specialist and general practitioner in honoring the referring physician by quick acknowledgment of referral by the specialist, and prompt, concise, intelligent reports of findings. The general practitioner should specify on referring the patient whether he desires a diagnosis and the patient referred back to him for treatment, or whether he desires the specialist to diagnose and treat the patient. In this way many misunderstandings can be avoided.

The American medical profession has no need to be on the defensive. It gives the public the best medical care in the world. Who best can judge the dollar-and-cents value of his services than the physician himself?

HARPER E. RICHEY, M. D.

ACCENT ON YOUTH—YOUR SOUTHERN MEDICAL ASSOCIATION

A new Southern Medical Association is appearing in the Ole South! The S. M. A. has many supporters North, East and West who contribute to its magazine, appear on its programs and befriend it generally, but largely this organization is of, by, and for the medical folks below the Mason-Dixon line. While we have no corner on the commodity "hospitality," that is one of the ingredients which has made the Southern outstanding lo these many years, —and particularly attractive to Kentuckians.

But now substantial improvements have been added to an already fine organization—a face lifting for a very attractive body. Chief among the objectives is the accent on youth. It is well recognized that the majority of S.M.A. members are older doctors who have long loved and supported the society. Their loyalty and activity are counted on and cherished still. But, with more and more competition from Specialized Societies, it is highly essential that more young doctors become members and actively support the meetings and programs of the Southern.

Here are some of the things that have been done or are on the program for accomplishment soon. After 42 years of fine service, that nonpariel and patriarch of Secretary-General Managers, Mr. C. P.

Opinions expressed in contributions to this Journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

Loranz, has been elevated to a new office, Counsel and Public Relations Adviser. In his place is to be found Mr. V. O. Foster, former Executive Secretary of the Tennessee Medical Society, and one of the leading young experts nationally in this field. Another young man of proven worth, Mr. Robert Butts, is now Business Manager.

As for the *Journal*, Rudolph Kampmeier, M.D., (Professor of Medicine at Vanderbilt University Medical School, Governor of the College of Physicians for Tennessee and Editor of several other important Medical Journals) has taken over with a vengeance his new duties as Editor of the S. M. A. periodical. He has appointed a fairly young group of outstanding specialists as advisers, changed the format of the *Journal* and declared repeatedly that he wants the fine young doctors of the South to submit their original work for publication. More and more the scientific and technical exhibits will cater to the young physician, as directed by the energetic and outstanding Council Chairman, Milford Rouse, M. D., of Dallas.

Especial attention is being given to the location of meeting places. In 1955 it is Houston, Texas, with fine hotel facilities at the famous Shamrock and the scientific program scheduled for the nearby nationally recognized Texas Medical Center. In 1956, it is the Golden Anniversary Meeting at Washington, D. C., where two large adjacent hotels will house the meeting. The District of Columbia Medical Society is having its Annual Meeting in connection with the S.M.A. gathering and will control the entire first day of the program. In 1957 it is Miami and probably New Orleans in 1958. So, it is obvious that the comfort, education and social enjoyment of the physicians and their families is being emphasized. Eventually, with better convention hall facilities available, another Louisville meeting is anticipated.

Mention should certainly be made of the new Associate State Councilors. In Kentucky these are: Harvey Stone, M.D., of Hopkinsville; Clifford Heisel, M.D., of Covington; and Sam Overstreet, M.D., and Duffy Hancock, M.D., of Louisville. They will help in securing new members and servicing the old,—pointing out the especially attractive Group Insurance policy available, among other things. Emphasis will be placed also on the remarks of a prominent medical specialist who suggested recently "Membership in societies devotel to specialties is desirable and necessary; however, membership and attendance of general societies such as the Southern Medical Association where there is a great deal of intermingling outside as well as in the meetings, are also necessary to prevent over-specialization, or limiting one's knowledge rather than one's practice."

Kentucky has furnished four Southern Medical Association Presidents and many other leaders. It is anticipated that with the new accent on youth, and a bigger and better S.M.A., many physicians of the Bluegrass state will want to join up, publish in the *Journal*, and attend the outstanding annual gatherings of this fine old Dixie Society.

A. Clayton McCarty, M. D.
Councilor for Kentucky S.M.A.

ORGANIZATION SECTION

Eight New Members Elected to Board of Consultants

Eight new members of the Board of Consultants on Scientific Articles were elected on July 1 by the Advisory Committee to the Editor and approved by the editor to replace retiring members, who finished a three-year term on this date.

The newly appointed consultants, who will likewise serve three years, retiring in 1958, are: Harry D. Abell, M. D., Paducah; Henry B. Asman, M. D., Louisville; Marion F. Beard, M. D., Louisville; Rankin Blount, M. D., Lexington; Glenn Bryant, M. D., Louisville; William C. Buschemeyer, M. D., Louisville; Richard Elliott, M. D., Lexington; Douglas Scott, M. D., Lexington.

Retiring members are: Rufus C. Alley, M. D., Lexington; James W. Bruce, M.D., Louisville; Carl H. Fortune, M. D., Lexington; Emmet F. Horine, M. D., Brooks; William O. Johnson, M. D., Louisville; William R. Miner, M. D., Covington; George W. Pedigo, M. D. Louisville; William L. Woolfolk, M. D., Owensboro.

Bruce Underwood, M. D., Louisville, editor of the Journal of K. S. M. A., and Guy Aud, M. D., Louisville, chairman of the Advisory Committee to the Editor, expressed deep appreciation in a letter to the retiring members for their service, stating that it was felt that the Board had done much to lift the level of the scientific section of the Journal.

It was explained by Dr. Underwood that the members of the Board, 24 in all, cannot by Journal policy succeed themselves. Eight of them retire each year to be replaced by carefully chosen men in the same specialty.

Specialty Group Leaders Pleased With Space Assignments

Presidents and representatives of the nine specialty groups which are participating in the scientific program Thursday afternoon, September 29, during the Annual Meeting, expressed complete satisfaction with meeting place assignments following a recent tour of the locations.

This announcement was made by K. S. M. A. President Clyde C. Sparks, M. D., Ashland. It was pointed out that every effort was being made by the Committee on Scientific Assembly to provide adequate space for these sessions at the 1955 meeting so that all groups could be comfortably located.

Four of the group sessions will be housed in the Columbia Auditorium, one in the Calvary Episcopal Church across the street from the Auditorium, and four in the First Christian Church one-half block south of the Auditorium.

Following are the meeting room assignments:

Columbia Auditorium: Reference Committee Rooms, assigned to Kentucky Eye, Ear, Nose and Throat Society: Main Auditorium, to Kentucky Chapter, American College of General Practice; Basement Lounge, to Kentucky Chapter, American College of Physicians; Ballroom, to Southeastern Surgical Congress.

Calvary Episcopal Church: Kentucky Obstetrical and Gynecologic Society.

First Christian Church: Young People's Lounge, assigned to Kentucky Society of Anesthesiologists; Forum Classrooms, second floor, to Kentucky Chapter, American College of Chest Physicians; Downstairs Assembly Room, to Kentucky Chapter, American Academy of Pediatrics; Main Floor Sunday School Assembly Room, Kentucky Psychiatric Association.

K. S. M. A. members may choose one or more programs and are free to move from one group to another at these specialty group sessions, Dr. Sparks said. There will be a 45-minute intermission at 2:45 p. m. to enable the members to visit the exhibits, he added. At 3:30 p. m., the groups will convene for a second session.

Heavy Turnout of Grads Expected at Med. School Reunions

Mr. Leslie Shively, director of alumni relations at the University of Louisville, stated that he had received a heavy response to the announcement of the ten class reunions of the University of Louisville School of Medicine to be held during the 1955 Annual Meeting.

Mr. Shively added that the turnout of old grads this year promises to be the best of any reunions of the medical school to date. The reunion dinners, for the classes of 1905, '10, '15, '20, '25, '30, '35, '40, '45 and '50, are to follow the cocktail party given by the medical school faculty in the Crystal Ballroom at the Brown

Hotel on Thursday evening at 5:00 o'clock, September 29.

It has been planned to have class reunions of medical school graduates a regular feature of K. S. M. A. Annual Meetings in the future. In 1956, the ten classes will start with the year 1906 continuing with each consecutive fifth year through 1951.

Fourteenth District to Hear Dr. Sparks at Pikeville

Clyde C. Sparks, M. D., Ashland, president of K. S. M. A., will address the Fourteenth Councilor District on "Changing Trends in Medicine" on September 22, at the Green Meadow Country Club, Pikeville, according to John G. Archer, M. D., Prestonsburg, councilor for the district.

Sharing the after dinner program with Dr. Sparks will be Wallace Herrell, M. D., Lexington, who will speak on "The Use and Abuse of Antibiotics."

Scientific papers will be presented during the afternoon by William Rumage, Jr., M. D., Louisville, who will speak on "Treatment of Burns," Maurice Kaufman, M. D., Lexington, on "Seasonal Allergy," Thornton Scott, M. D., Lexington, on "Rheumatic Heart Diseases," and Stuart Graves, Jr., M. D., Louisville, on "Anti-Coagulants in Myocardial Infarction."

The Pike County Medical Society will be hosts to the district. Gene Combs, M. D., Pikeville, secretary of the host society is making arrangements for the district meeting. R. W. Allen, M. D., also of Pikeville, is president of the county society.

SMA Annual Meeting To Be Held in Houston, Nov. 14-17

The Southern Medical Association, the nation's largest general medical organization, will hold its 49th annual meeting in Houston, Texas, on November 14-17, 1955. More than 3,000 of the association's 10,000 members are expected to attend the four-day meeting, according to A. Clayton McCarty, M. D., Louisville, councilor for the State of Kentucky.

The Scientific Assembly of the Southern Medical Association is one of the nation's outstanding postgraduate events for practicing physicians. The intensive work of the Scientific Assembly will feature some 300 papers by outstanding researchers and practitioners in all of the major medical and surgical fields.

The following sections will hold from one to three sessions: Anesthesiology, General Practice, Gastroenterology, Medicine, Surgery, Neurology and Psychiatry, Pathology, Proctology, Urology, Gynecology, Obstetrics, Public Health, Industrial Medicine and Surgery, Pediatrics, Allergy, Radiology, Dermatology and Syphilology, Physical Medicine and Rehabilitation; Orthopedic and Traumatic Surgery, Ophthalmology and Otolaryngology. All of the scientific programs of the 20 Sections will be presented in the various meeting rooms of the fabulous Shamrock.

In addition to the 20 Sections of the Association, several other major specialty groups will meet conjointly. Among those planning programs in Houston are: American College of Chest Physicians—Southern Chapter, Association for Research in Ophthalmology, Southern Gynecological and Obstetrical Society, Women Physicians, and the Southern Society of Cancer Cytology.

The Association has a Housing Bureau, Box 1267, Houston, Texas, to which all requests for hotel accommodations should be addressed. A formal hotel reservation form appears in every current issue of the Southern Medical Journal and will also be attached to the Preliminary Program which will be mailed to 37,500 physicians in the South.

Annual Meeting Golf Tournament Plans Nearing Completion

Plans for the 1955 Annual Meeting golf tournament to be held September 26 through 29 are near completion, according to Clifton G. Follis, M. D., Glasgow, chairman of the K. S. M. A. Golf Committee.

The tournament will be held at the Big Springs Country Club. K. S. M. A. members and their guests may play Monday through Thursday, September 26-29, but only members of the golf association are eligible for prizes. Only the score of the first day of play will count in the contest for tournament awards.

Three traveling trophies will be awarded, to be kept in the Headquarters Office, said Dr. Follis. Miniature trophies will be given the winners as a permanent award, he added.

Other members of the Golf Committee are: Joseph R. Humpert, M. D., Covington, Robert Long, M. D., Louisville, Sam Overstreet, M. D., Louisville, and William C. Wolfe, M. D., Louisville.

Nominations for 2 KSMA Awards in Hands of Committee

Nominations for the K. S. M. A. Distinguished Service Award and the Outstanding General Practitioner Award for 1955 are now in the hands of the awards committee, according to Ernest C. Strode, M. D., Lexington, chairman of the committee.

Nominees for the two awards were chosen by county medical societies or individual members of K. S. M. A. The awards will be presented to the recipients selected by the committee following the Inaugural Ceremony during the Annual Meeting, on Thursday morning, September 29, Dr. Strode said.

The present method of selecting the winners was decided upon at a meeting of the House of Delegates during the 1954 Meeting. The action of the House directed "the speaker of the House of Delegates to name a committee of five (not necessarily members of the House of Delegates) to serve throughout the year for the purpose of selecting the recipients of the Distinguished Service Award and the Outstanding General Practitioner Award—."

As a result of this action, Dr. Strode was appointed by Speaker Charles A. Vance, M. D., Lexington, as chairman, with the following committeemen: H. B. Stone, M. D., Hopkinsville; L. T. Minish, M. D., Louisville; P. A. Bryan, M. D., Ashland; J. B. Kurre, M. D., Owensboro.

Charlestown Conference, October 2, To Attract KSMA Members

The Kentucky State Medical Association will be represented at the Fourth Annual Conference on Medical Care in the Bituminous Coal Mine Area at the Daniel Boone Hotel, Charlestown, West Virginia, in a day-long meeting on October 2, according to Carl Fortune, M. D., Lexington, chairman of the K. S. M. A. Advisory Committee to the United Mine Workers of America's Welfare and Retirement Fund.

Five states are invited each year to participate in this conference, which is sponsored by the Committee on Medical Care for Industrial Workers, the Council on Industrial Health, and the Council on Medical Service of the American Medical Association. The five states are: Kentucky, Pennsylvania, Tennessee, Virginia and West Virginia.

Dr. Fortune said in addition to members of his committee and officers, who have special invitations, any K. S. M. A. members interested in attending this meeting will be welcome. The focal point in the conference will be a discussion of the activities of the liaison committees and the relationships that have developed between those committees and the Area Medical Administration of the U. M. W. A., the A. M. A. announcement said.

The conference will be preceded by a tour Friday and Saturday, September 30 and October 1, of selected areas in the coal fields. Information on this tour, which leaves Charlestown at 8:00 a. m. may be had by contacting the Headquarters Office.

Five KSMA Members to Serve on Governor's Committee

Five K. S. M. A. members are on the newly appointed Governor's Committee on Rehabilitation, which decided at its first meeting in Frankfort on July 18 to conduct a survey to encompass the resources and needs for training the physically and mentally handicapped in Kentucky.

The Kentucky physicians serving on the committee are J. Gant Gaither, Hopkinsville, president-elect of K. S. M. A.; J. Murray Kinsman, Louisville, dean of the University of Louisville School of Medicine; Franklin Moosnick, and Marshall Jones, both of Lexington; Asa Barnes, Louisville, who also serves as an alternate on the executive committee. Dr. Elvis Stahr, Lexington, is chairman.

The survey will be under the supervision of the Legislative Research Commission. The aim of the committee is to co-ordinate what is known about rehabilitation to avoid duplication in achieving an effective program. The study was recommended in June by the Kentucky Rehabilitation Conference.

Dr. John Walker Moore Memorial Plans Are Altered

The Dr. John Walker Moore Memorial Fund to which many members of the Association have contributed or subscribed has been altered, with the consent of the great majority of subscribers. Dean Kinsman felt that the possibility was remote of attaining the original goal of $500,000 thought necessary to establish a permanent professorship and that the funds already obtained—about $50,000—would better be used in establishing a medical department research laboratory.

A letter was sent to the contributors asking their permission to make the change, and the replies indicated an almost unanimously favorable response. Unfortunately, it has been learn-

ed that a few contributors failed to receive a letter. Should you be one of these it would be appreciated if you would write to Dr. Kinsman so stating and expressing your reaction to this alteration in plan.

It is felt by all that the proposed laboratory, in the enlarged medical department, is an urgent necessity in order to provide the new department head with facilities considered essential. Your committee will continue to solicit contributions to this end. All are aware of how close to Dr. Moore's heart was laboratory research in medicine. Since the larger memorial of a professorship seemed unobtainable, it is felt that the laboratory, established as a permanent memorial to him, will be most fitting.

Sam A. Overstreet, chairman of committee

Scientific Exhibits Limited to Members and Guest Speakers

The 14 scientific exhibits to serve as a supplement to the scientific program of the 1955 K. S. M. A. Annual Meeting have been limited this year to members of the Association and the guest speakers, according to Everett L. Pirkey, M. D., Louisville, chairman of the Committee on Scientific Exhibits.

"This is the first year a sufficient number of K. S. M. A. members have applied to use all the available booths," said Dr. Pirkey. "And while we regret the necessity for turning down the applications of other physicians and agencies, we feel that our own men and the guest speakers appearing on our scientific program should have first opportunity. We are indeed gratified that so much interest has been shown by the members."

The exhibits cover an impressive range of recent medical and scientific developments, Dr. Pirkey stated. Listed below are the 14 scientific exhibits.

"Osteoarthritis—Rheumatoid Arthritis: Diagnosis and Practical Treatment," by John W. Sigler, M. D., Henry Ford Hospital, Detroit, Michigan;

"Radioactive Lutetium," by William M. Christopherson, M. D., and Harold F. Berg, M. D., University of Louisville School of Medicine, Louisville;

"Treatment of Burns," by Andrew M. Moore, M. D., Dorton, Webb, Royalty and Moore Surgical Group, Lexington;

"The Selection of Patients for Radical Mastectomy," by George B. Sanders, M. D., David W. Griffin, M. D., David W. Kinnaird, M. D., Louisville;

"The Unstable Knee Joint," by Robert W. Augustine, M. D., Madisonville;

"Functional Fixation of Femoral Neck Fractures," by W. K. Massie, M. D., Lexington;

"Reduction of Serum Cholesterol by Sitosterol," by Maurice M. Best, M. D., Charles H. Duncan, M. D., and R. E. Shipley, M. D., University of Louisville School of Medicine, Louisville;

"Malignancies in Childhood," by Israel Diamond, M. D., Children's Hospital, Louisville;

"Homografts in the Treatment of Arterial Disease," by Alvin B. Ortner, M. D., and J. Herman Mahaffey, M. D., University of Louisville School of Medicine, Louisville;

"Residual Volume Studies," by J. P. Holt, M. D., O. W. Shadle, M. D., A. J. Wimpy, and J. Diana, University of Louisville Institute for Medical Research, Louisville;

"Portal Hypertension, Medical and Surgical Aspects," by Franklin D. Moosnick, M. D., and Jack G. Webb, M. D., Lexington;

"Ankle Blowout Syndrome," by Harold F. Berg, M. D. and Alvin B. Ortner, M. D., University of Louisville School of Medicine, Louisville;

"Tissue Culture Methods in Poliomyelitis," by Alex J. Steigman, M. D., and Murray M. Lipton, M. D., University of Louisville School of Medicine, Louisville;

"Problem Fractures," by Arthur L. Cooper, M. D., Somerset.

Dr. Morse Announces Diabetic Drive To Be Held Nov. 13-19

The 1955 Kentucky Diabetes Detection Drive, sponsored by the Kentucky State Medical Association in cooperation with the American Diabetes Association, will be held during National Diabetes Week, November 13-19, it was announced by Carlisle Morse, M. D., Louisville, chairman of the Diabetes Committee.

"Many organizations throughout the state have expressed their willingness to endorse and support this drive, which is aimed at detecting the undiscovered diabetic," said Dr. Morse.

This will be the fifth year that K. S. M. A. has sponsored the state-wide drive, during which every physician who is a member of the association will be asked to give free urine sugar tests to all persons requesting them.

"The response to date from county medical societies in reporting their Diabetes Committee chairman indicated that participation in the campaign throughout the state will approach

that of 1954," Dr. Morse added.

Last year 45,357 tests for detecting diabetes were given, and 200 newly discovered diabetics were reported, Dr. Morse said. Approximately 700 diabetics were discovered over the four-year period during which the campaigns have been conducted. This means many persons have been saved to lead useful, active lives, who might otherwise have been debilitated by diabetes, he added.

Henry Co. Medical Society Begins Series of Newspaper Articles

The Henry County Medical Society began a series of articles in July to appear weekly in the local newspaper, the New Castle Local, on health and medical problems.

Homer C. Harper, Editor of the Henry County Local, said in an editorial appearing on July 22: "This series of articles might be termed a once in a lifetime opportunity to help yourself, your famly and the county by reading every word written. —I have read many of the prepared articles—and they are written so the layman can understand what the profession is speaking of."

The members of the Society will write the articles. In addition, a question and answer column will be conducted each month in which everyone in the County has been invited by the medical society to write in their question or questions. S. L. Hicks, M. D., New Castle, is president of the Society; S. B. May, M. D., Eminence, vice-president; G. E. McMunn, M. D., Eminence, secretary.

Special AMA Committee to Review Functions of Joint Commission

A seven-man committee headed by W. C. Stover, M. D., Booneville, Indiana, has been appointed by E. V. Askey, M. D., speaker of the A. M. A. House of Delegates, to review the functions of the Joint Commission on Accreditation of Hospitals.

This action grew out of the introduction of six resolutions at the Atlantic City meeting this summer to the House of Delegates, protesting certain phases of the Commission's work.

This special committee, according to the action taken by the House of Delegates, has been instructed to make an independent study or survey and report its findings and recommendations at the next annual meeting. Any physician or hospital that have observations or suggestions concerning this matter are urged to pass them on to Dr. Stover's committee.

Kentucky Pediatric Society Seeks New Members

The Kentucky Pediatric Society, whose chief purpose is to improve the medical care of infants and children in Kentucky, warmly invites all interested Kentucky physicians to make applications for membership, Selby V. Love, M. D., Louisville, secretary of the organization, announced.

It was pointed out that the organization, which was formed some five or six years ago, in addition to pediatricians, included many family physicians, surgeons, and other physicians interested in pediatric care. The organization meets each spring and hears lectures by one or more distinguished out-of-state guest speakers.

At the 1955 meetings, it was decided to broaden its base of service by increasing its membership, Dr. Love said. Alex J. Steigman, M. D., Louisville, is president of the society. Application forms may be secured from: Miss Barbara Aicken, Children's Hospital, Louisville.

Southern Trudeau Society to Meet in Louisville, Sept. 21-23

The Southern Trudeau Society is to meet in Louisville at the Brown Hotel, September 21 through 23, according to an announcement by J. Irvin Nichols, executive secretary of the Kentucky Tuberculosis Association.

Tuberculosis and the General Practitioner, Problems in Chemotherapy, and Non-Tuberculosis Disease are some of the general problems to be considered at the scientific sessions. There will be a Consecutive Case Conference (Pembine Type) on Thursday evening, September 22.

Eight hours of formal credit has been tentatively approved for members of the Kentucky Chapter of the Academy of General Practice, it was announced.

Taylor County to Sponsor Second Series of Medical Forums

The Taylor County Medical Society plans to present their second annual series of public medical forums during October and November, according to Henry F. Chambers, M. D., Campbellsville, president of the county society.

The exact dates have not been decided upon, Dr. Chambers said, but it is planned to have the four-meeting series during the last two

weeks of October and the first two weeks of November.

It is planned, he added, to discuss the subjects of poliomyelitis and of mental illness at two of the forums. Topics for the other meetings have not been decided upon.

The purpose of the series is to give the public an opportunity to ask the profession questions on the chosen medical subjects. The American Medical Association and the Kentucky State Medical Association have endorsed the free medical forums, and similar forums have been held in other Kentucky counties.

P. R. Courses for M. D. Employees Planned in Three Counties

Three county societies are to sponsor public relations courses for physicians assistants starting in October, according to W. Vinson Pierce, M. D., Covington, chairman of the Educational Campaign Committee.

Tentative dates have been set for the Taylor County Medical Society public relations courses at Octorber 3, 17, 31, and November 15, to be held in Campbellsville. October 4, 18, and November 1 and 15 are the dates now planned for the Pulaski County courses at Somerset, and October 5, 19, and November 2 and 16 for the Boyle County courses at Danville.

The courses, developed by the Education Campaign Committee for the purpose of instructing secretaries and assistants of physicians in helpful public relations techniques in the office, are available to the employees of physicians in adjoining counties, as well as of the sponsoring county, Dr. Pierce said.

Freshman Enrollment at Medical School Totals 102 on August 1

The 1955 enrollment of freshmen at the University of Louisville School of Medicine had reached a total of 102, according to Arch E. Cole, M. D., director of admissions, at the close of registration on August 1.

Of this total, 91 are Kentuckians. The University of Louisville trustees voted early in the year to enlarge the entering class from the previous limit of 100 to 124, with the purpose of accommodating all qualified Kentucky students who wished to enter.

Karl Winter, M. D., Louisville, chairman of the K. S. M. A. Advisory Committee to the University of Louisville School of Medicine, said in his report to the House of Delegates that his committee had been invited to consult with the Admissions Committee of the University and that the Advisory Committee was well pleased with the efforts of the Admissions Committee.

Druggists Elect Officers, July 27

Mr. Fred Lewis, Jr., Harlan, was elected president of the Kentucky Pharmaceutical Association during its 78th annual convention at French Lick, Indiana.

Other officers of the druggists' association installed at a banquet on July 27 are: John C. Schneider, Louisville, vice-president; E. L. Williamson, Princeton, vice president; J. J. Thompson, Covington, vice president, E. M. Josey, Frankfort, secretary; and J. P. Arnold, Franklin, treasurer.

Pleasureville Honors Dr. Carter

On August 8, the citizens of Pleasureville and the surrounding countryside gathered at the High School Auditorium to honor W. F. Carter, M. D., for 33 years of service to the community.

All the physicians of Henry County cooperated in making the day a memorable one, according to Arthur Hurst, M. D., Louisville, who attended the celebration. Dr. Hurst, who is K. S. M. A. vice-president from the central district, represented the Kentucky State Medical Association.

PR Institute Held in Chicago

The 1955 A. M. A. Public Relations Institute was held in Chicago August 31 and September 1 at the Drake Hotel. Discussions on activity in national legislation, basic public relations techniques, medicine in the magazines, and the individual's role as a P. R. communicator were held.

Special tribute was paid to county medical societies at an informal luncheon session, and at another luncheon James E. Bryan, author of "Public Relations in Medical Practice," discussed his P. R. theories.

"Dr. Richey Day" Celebrated

Leslie Richey, M. D., Park City, was honored on July 30 when the citizens of his community celebrated a "Dr. Richey Day," sponsored by the Lions Club of Park City. Many of the 3,112 babies delivered by Dr. Richey during the 43 years of his practice there were present at the public ceremony.

AMA Approves Claim Forms

The A. M. A. Council of Medical Service has approved five new simplified insurance claim forms drawn up by a special committee of the Health Insurance Council working in collaboration with the A. M. A. Council's Committee on Prepayment Medical and Hospital Service.

These five forms, together with one approved in 1954, are, essentially, adaptations of two basic forms, one designed for groups and the other for insurance underwritten on a non-group, or individual basis. It is hoped that the majority of the insurance companies identified with the Health Insurance Council will use these forms in their day-to-day claims administration and that physicians will cooperate by completing the simplified forms promptly.

Society Named for Dr. Ackerly

A group of psychiatry students honored Spafford Ackerly, M. D., Louisville, by naming a society for him. Theodore Schramm, M. D., Louisville, president of the newly formed "Ackerly Society of Psychiatric Residents of the University of Louisville School of Medicine," said its purpose was the exchange of ideas on different aspects of psychiatry. The society gave a dinner on July 12 for Dr. Ackerly, who is professor and chairman of the department of psychiatry at the medical school.

Ohio GP's To Meet in Dayton

The Ohio Academy of General Practice has announced its Fifth Annual Scientific Assembly to be held at the Dayton-Biltmore Hotel in Dayton on September 20-21.

Eleven scientific papers by prominent speakers will be presented, according to Earl D. McCallister, M. D., Columbus, Ohio, executive secretary of the Academy. Postgraduate credit of 10 hours will be given A. A. G. P. members, it was stated.

Dr. Gaines Heads 16 State Council

Frank M. Gaines, Jr., M. D., Kentucky Commissioner of Mental Health, was elected chairman a 16-state Southern Regional Council on Mental Health Training and Research at the organization of the council in Atlanta, Georgia, on July 12. The council is an advisory group to the Southern Regional Educational Board, which works with the Southern Governors Conference.

The council will seek to improve opportunities for training psychiatrists, clinical psychologists, psychiatric social workers and nurses, work out reciprocal arrangements between states for training mental health personnel, and seek interstate support for mental health research.

Practice Units Brochure Available

An 80-page brochure on Medical Practice Units is available to state and county societies for loan to individual physicians by the A. M. A. Physicians Placement Service of the Council on Medical Service, according to A. M. A. News Notes.

The brochure provides a handy check list for physicians and community leaders who wish to establish medical practice units. The comprehensive planning guide was developed by the Sears-Roebuck Foundation after consultation with the A. M. A.

Heart Association Plans Program

The American Heart Association is making plans for the most extensive program ever conducted by the Association for the 31st Annual Meeting and 28th Scientific Session to be held in New Orleans, October 22-28, according to Robert A. Thornbury, executive director of the Kentucky branch.

Attendance at the Scientific program is open to non-members as well as to Heart Association members. A moderate registration fee will be charged non-members. Registration forms can be obtained by writing local associations, or the American Heart Association, 44 East 23rd Street, New York.

U. of L. Appointments Made

The University of Louisville Board of Trustees has approved the appointments and promotions of several professors and instructors in the School of Medicine made through the Medical Council on June 22, 1955.

Thomas E. Padgett, M. D., was appointed an instructor in radiology; William Fielding Rubel, M. D., an instructor in thoracic surgery. Robert Bergner, M. D., was promoted to professor of anesthesiology and chief of the section; Orville L. Ballard, M. D., to assistant professor of medicine. Guy Aud, M. D., was given a change in status to professor emeritus of surgery, and Bernard John Schoo, M. D., to a fellow in pediatric surgery.

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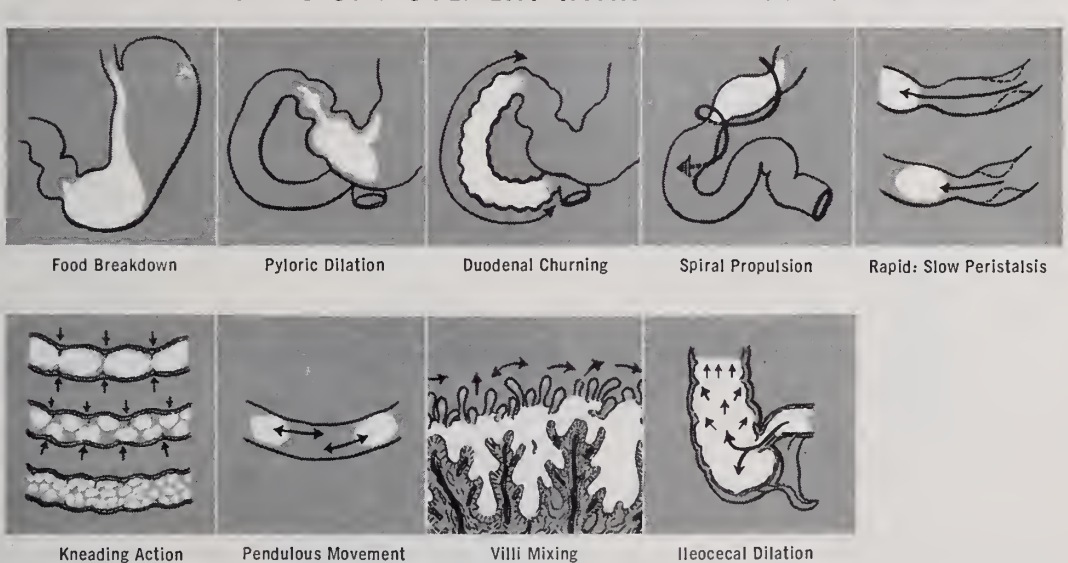

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News Items

Charles B. Stacy, M. D., Pineville, councilor for the 15th District, will return to the States following a two-months tour abroad in time for the K. S. M. A. Annual Session, September 27, 28 and 29. Dr. Stacy will travel in Africa and Europe.

John Leslie Vogel, M. D., has become associated with **Arthur Clayton McCarty, M. D.,** in the practice of internal medicine at Louisville. Dr. Vogel graduated from Duke University in 1950. In 1950-51 he served his internship at Grady Memorial Hospital, Atlanta. He served residencies at Lawson V. A. Hospital, Chamblee, Georgia, and Emory University Hospital, Atlanta.

J. C. Denniston, M. D., Louisville, has returned to Lewisburg, Kentucky, to resume the practice of medicine. Dr. Denniston left Lewisberg about ten years ago. He is a graduate of Tufts College Medical School, class of 1940.

Louis B. Sternberg, M. D., has opened an office in St. Matthews. Dr. Sternberg graduated from the University of Cincinnati College of Medicine in 1934 and interned at the Jewish Hospital in Cincinnati. He has recently completed a residency at Children's Hospital, Louisville.

Clem F. Burnett, Jr., M. D., has announced the opening of his office in association with the Fuller-Morgan Hospital and Clinic at Mayfield. His practice will be limited to diseases of the heart and other internal organs. Dr. Burnett is a graduate of the Medical College of Virginia, 1947. His internship was spent at the U. S. Marine Hospital, Statten Island, New York.

Harvey C. Hardgree, Jr., M. D., has opened an office in St. Matthews, for the practice of general surgery. Dr. Hardgree graduated from the University of Oklahoma School of Medicine in Oklahoma City, class of 1950. He interned at the Louisville General Hospital, and served a residency at the Veteran's Administration Hospital in Louisville.

Walter L. Cawood, M. D., Harlan, is in training at Johns Hopkins Hospital, Baltimore. He is a graduate of the University of Louisville School of Medicine, class of 1946. His internship was served at the Nashville General Hospital. Dr. Cawood had been practicing with the Bailey Clinic in Harlan.

J. W. York, M. D., Cammer, announced his retirement from the practice of medicine in June, due to the ill health of his wife. He graduated from the University of Nashville Medical Department in 1909.

G. M. Gumbert, Jr., M. D., has given up his practice at Olive Hill to take some additional surgical training at the Good Samaritan Hospital, Lexington, beginning July 1. Dr. Gumbert graduated from the University of Louisville School of Medicine in 1953 and interned at the Good Samaritan Hospital.

Roy Mason Kash, M. D., has opened offices again at Mt. Sterling, where he was located prior to taking special courses in diseases of the eye, ear, nose and throat at the University of Louisville and the Barnes Hospital in St. Louis. Dr. Kash graduated from Duke University school of Medicine in 1943.

Ben W. Crawford, M. D., took over the practice of **G. M. Gumbert, M. D.,** at Olive Hill in July. Dr. Crawford also graduated from the University of Louisville School of Medicine in 1953. His internship was spent at the District of Columbia General Hospital, Washington, D. C.

J. M. Hunt, Jr., M. D., has announced the opening of the Wickliffe Clinic at Wickliffe on July 11, following his return from the service. Dr. Hunt graduated in 1949 from the University of Louisville School of Medicine. He interned at the U. S. Naval Hospital, Great Lakes, Illinois.

Donald Ware, M. D., who graduated from the University of Louisville School of Medicine, class of 1954, located at Cloverport on July 1. He will be associated with **William C. Mitchell, M. D.** Dr. Ware interned at the Louisville General Hospital.

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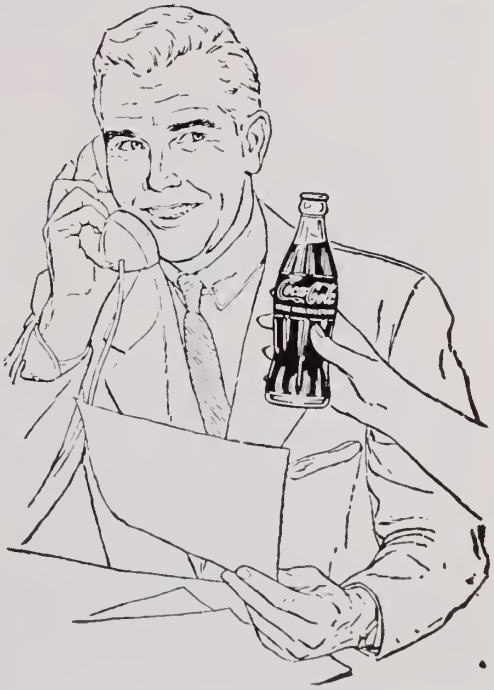

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John Cummings, M. D., former Flemingsburg physician, who has been associated with the Hedges Clinic at Frankfort, Illinois, accepted the post of assistant resident, department of surgery, University of Cincinnati College of Medicine, beginning July 1. He graduated from the University of Cincinnati College of Medicine in 1937.

Robert Wilson Fidler, M. D., who completed his internship at the Good Samaritan Hospital in Lexington on June 30, opened an office in Flemingsburg in July. Formerly from Ashland, Dr. Fidler is a graduate of the University of Louisville School of Medicine in the class of 1954.

John Hingeley, M. D., opened an office at Lawrenceburg. Dr. Hingeley, a native of Pennsylvania, graduated from the Bowman Gray School of Medicine in 1954. His internship was served at the Good Samaritan Hospital in Lexington.

William H. Wall, M. D., and John W. Pate., M. D., have become associated with the Trover Clinic at Madisonville, effective July 1. Dr. Wall is a graduate of the University of Tennessee College of Medicine, 1950, and interned at the Henry Ford Hospital in Detroit, Michigan. Dr. Pate is a 1952 graduate of the University of Arkansas School of Medicine; he interned at the Arkansas Baptist Hospital at Little Rock.

C. B. Clegg, M. D., has become associated with **Edward J. Sharman, M. D.,** at Elizabethtown. For the past four years he has been a resident surgeon at the Veterans Administration Hospital in Louisville. He graduated from the University of Louisville School of Medicine in the class of 1950 and served an internship at Indianapolis General Hospital.

F. H. Russell, M. D., Wickliffe, was given a week of recognition, June 16 through 23, in his home community after 33 years of service, according to news clippings from Wickliffe. Dr. Russell, who has been critically ill at St. Mary's Hospital in Cairo, is now retiring from the practice of medicine, according to this source.

Fifteen physicians from Covington, Brooksville and Maysville attended the Licking Valley Medical Association in Maysville, June 9. The quarterly session met at luncheon. **J. T. Garrett, M. D.,** of Covington, discussed "X-ray Diagnosis" with the members.

Peggy Jean Howard, M. D., has announced the opening of offices at Louisville for practice limited to obstetrics and gynecology. Dr. Howard graduated in 1951 from the University of Louisville School of Medicine and interned at Woman's Hospital in Detroit in 1952. She served a residency at the same hospital.

A. L. Embry, M. D., who recently completed his internship at the Good Samaritan Hospital in Lexington, began the practice of medicine at Millwood the week of July 4. He received his degree of Doctor of Medicine in 1954 from the University of Louisville School of Medicine.

J. B. Lyen, M. D., Lawrenceburg, was one of the principal speakers at the dedication of the new Salvation Army Hospital in Louisville on June 17. A plaque honoring Dr. Lyen was unveiled at the dedication, at which a score of the more than 3,500 babies Dr. Lyen has delivered were present. Dr. Lyen donated $50,000 for the new hospital, according to press clippings from Lawrenceburg.

Stuart Graves, Jr., M. D., has recently become associated with **James R. Hendon, M. D., William A. Blodgett, M. D.,** and **Lawrence T. Minish, Jr., M. D.,** in Louisville. Dr. Graves is a graduate of the Columbia University College of Physicians and Surgeons, class of 1947. He interned at St. Luke's Hospital, New York City.

T. P. Scott, M. D., Carlisle, was honored for 50 years of service as a physician, 36 years of which were spent in Carlisle and Nicholas County, at the second annual Nicholas County Hospital benefit dinner, June 16, according to news sources from Carlisle. Dr. Scott received a gift of a television set from the citizens of the community.

John S. Ashworth, M. D., has recently moved his offices from Russell to Cattletsburg. Dr. Ashworth graduated from the University of Louisville School of Medicine in 1952, interned at the Franklin Hospital in San Francisco, and served a residency at the Good Samaritan Hospital in Lexington.

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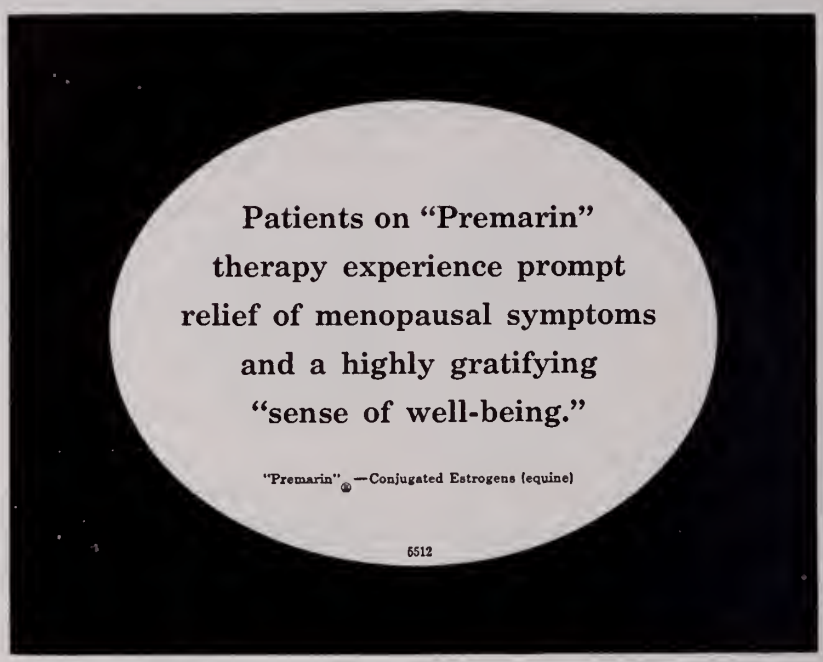

Paul Harrison, M. D., closed his office in Owenton on July 1. He has moved to Hagerstown, Maryland, about 25 miles from Washington, D. C. Dr. Harrison is a graduate of the University of Louisville School of Medicine, class of 1951, and interned at the Good Samaritan Hospital in Lexington.

Jay W. Wilson, M. D., a native of Murray, opened offices for the general practice of Medicine in Jeffersontown the first of July. He graduated from the University of Louisville School of Medicine in 1954 and has been associated with Saint Elizabeth Hospital in Covington for the past year.

The resignation of **James A. O'Brien, M. D.,** county health officer in Franklin, was announced the week of June 12, and became effective July 1. If health permits, Dr. O'Brien plans to return to limited practice in southwest Missouri, his native state. He was graduated from the St. Louis University School of Medicine in 1928 and interned at the Washington Boulevard and Cook County Hospitals in Chicago.

Ralph Gambrell, M. D., who recently completed his internship at Good Samaritan Hospital in Lexington, has joined **C. L. Thornberry, M. D.,** in a partnership for the practice of medicine at Cynthiana. He went to Cynthiana in July. Dr. Gambrell is a graduate of the University of Louisville School of Medicine, class of 1954.

Paul J. Parks, M. D., has re-opened his office at Richmond, after two years at Fort McPherson, Atlanta, Georgia, where he was chief of medicine at the U. S. Army Hospital. Dr. Parks is a graduate of the class of 1948 of the University of Louisville School of Medicine, and he interned at the Louisville General Hospital.

Charles P. Bartley, M. D., Morganfield, assumed new duties at the Veterans Administration Hospital in Louisville on July 1, as a resident in orthopedic surgery. Dr. Bartley opened a clinic in Morganfield three years ago. He is a graduate of the University of Louisville School of Medicine, class of 1949.

A. C. Kennedy, M. D., who graduated from the University of Louisville School of Medicine in 1954 and completed his internship at the Good Samaritan Hospital in Lexington on June 30, 1955, opened an office in Hardinsburg in July for the practice of medicine. Dr. Kennedy is a native of Morganfield.

V. L. Fisher, M. D., a native of White Pine, Tennessee, took over the Clinic in Morganfield on July 6, succeeding **Charles P. Bartley, M. D.** Dr. Fisher is a graduate of the University of Tennessee, Knoxville, and interned at Memphis Baptist Hospital.

Harry T. Overby, M. D., Paintsville, resigned as president of the Johnson County Medical Society in June, and began a residency in internal medicine at the University of Miami College of Medicine, Jackson Memorial Hospital, Miami, on July 1. Dr. Overby graduated from the University of Cincinnati College of Medicine in 1950 and interned at the University of Texas Medical Branch Hospital.

Pertinent Paragraphs

Two network medical television programs produced with the cooperation of the A. M. A. are scheduled to start this month. Ciba's "Medical Horizons," a half-hour weekly series, will be premiered over the ABC-TV network September 12, from 8:30 to 9:00 p. m. CDT. On September 20, the first of six shows in the 1955-56 series of "March of Medicine" programs, presented by Smith, Kline and French Laboratories, will be telecast over the NBC-TV network at 9:30 p. m. EDT.

A new program in residency training in physical medicine and rehabilitation for its full-time career physicians has been launched, it was announced by the Veterans Administration Information Service on July 21. The plan has a triple purpose: (1) to meet the demand for specialized care and treatment of veterans in VA hospitals and clinics; (2) to relieve the shortage of psychiatrists certified by the American Board of Physical Medicine and Rehabili-

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tation in VA's Department of Medicine and Surgery; (3) to strengthen VA's career service.

The American Urological Association is offering awards totaling $1000 for essays on the results of clinical or laboratory research in urology, limiting competition to urologists who have been graduated not more than 10 years and to men in training to become urologists. The first-prize essay will appear on the program of the 1956 meeting of the American Urological Association. Full particulars may be obtained from William Didusch, Executive Secretary, 1120 North Charles Street, Baltimore.

"To All My Patients," is the title of a 12-page leaflet designed to promote better physician-patient relationships to be distributed this month to members of the A.M.A. The pamphlet will be available in quantities for distribution to patients through the K.S.M.A. Headquarters Office. It explains the roles of various persons on the medical team in providing medical care and briefly discusses medical and hospital fees and health insurance.

A full schedule of events is being arranged for the 62nd Annual Convention of the Association of Military Surgeons of the United States to be held at the Hotel Statler, Washington, D. C., November 7, 8 and 9. The Association is the only international society devoted to the military aspects of medicine, dentistry, nursing and allied sciences.

It is estimated by the Veterans Administration that V.A. mental hygiene clinics are keeping an average of 2,200 mentally ill veterans out of hospitals every year, at a saving of about $4,000,000 a year. Veterans Administration said a great number of these veterans are engaged in productive work while receiving treatment at the clinics and that they generally improve sufficiently to end their outpatient treatments.

The release of the 1955 edition of the Manual of Serologic Tests for Syphilis was announced by the Public Health Service of the U. S. Department of Health, Education, and Welfare on July 28. Copies may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., for $1.00 per single copy.

LOW-BACK PAIN AND ITS RELATED CONDITIONS

(Continued from page 783)

Summary

1. This is a review of the conditions of the spine that produce symptoms often ending in a diagnosis of a ruptured intervertebral disc.

2. The actual occurrence of a ruptured intervertebral disc is rare in comparison to the number of ligamentous, muscular, or osseous defects which produce low-back and/or sciatic pain.

3. Spinal fusion operations should be done in conjunction with removal of ruptured discs when there is any evidence of instability of the lumbosacral joints.

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The 33rd annual scientific and clinical session of the American Congress of Physical Medicine and Rehabilitation will be held at the Hotel Statler, Detroit, August 28-September 2. All sessions will be open to members of the medical profession in good standing with the A. M. A. Full information may be obtained from Dorothea C. Augustin, executive secretary, American Congress of Physical Medicine and Rehabilitation, 30 North Michigan Avenue, Chicago.

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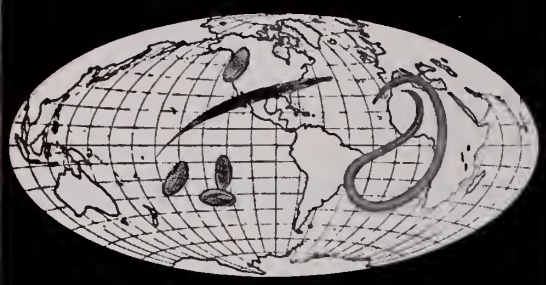

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COUNTY SOCIETY REPORTS

CALLOWAY

Nine members were present at the monthly meeting of the Calloway County Medical Society, at the Murray Hospital, June 6, 1955. C. H. Jones, M. D., president, presided.

Administrator Warming met with the Society and reported that the mail box for physicians would be up in the near future.

J. A. Outland, M. D., reported that the vaccine for the second Salk polio shot had not as yet been distributed, but would be given when available.

Dr. Outland also announced that Heinz Eichenwald, M. D., and Irwin Schafer, M. D., with the U. S. Public Health Service, were in Murray to follow up on the cases of hepatitis that were investigated last summer and fall. He also reported that there had been some diphtheria cases in the state.

Hugh Houston, M. D. Secretary

CALLOWAY

The regular monthly meeting of the Calloway County Medical Society was held in the library of the Murray Hospital, Murray, on July 5, 1955. Nine physicians were present.

C. H. Jones, president, presided. The names of the Committee on the Diabetic Detection drive were read. They are: A. D. Butterworth, M. D., chairman; J. L. Hopson, M. D.; John Quertermous. It was announced that the drive would be held the week of November 13.

Hugh Houston, M. D., stated that the society had received further requests from the American Cancer Society to conduct a Cancer Mobile Clinic. No action was taken on this.

J. A. Outland, M. D., reported that he had no further information from state officials regarding the second polio shot.

Hugh Houston, M. D., secretary

GRANT

The Grant County Medical Society were dinner guests of O. A. Cull, M D., and Mrs. Cull at a meeting of the Society June 9 at the Hotel Donald in Williamstown.

The Society had no nominations for service awards to be made at the K.S.M.A. Annual Meeting in September and no suggestions to offer the Nominating Committee of K.S.M.A.

The secretary of the Society was authorized to order the Wyeth film on "Management of Streptococcal Infection" for the September meeting. There was a discussion of immunization schedules and the polio program for the summer.

Regrets were expressed by F. R. Scroggin

in the absence of Dr. Cull to Paul Harrison, M.D., Owenton, that he is moving to Haggerstown, Maryland, as well as good wishes for his success in his new practice.

Members present in addition to the above were: Lenore Chipman, M.D., C. C. Waldrop, M.D., and Virginia Kratz, M.D.

PIKE

"The Use and Abuse of Antibiotics" was the subject of a paper by Wallace Herrell, M.D., Lexington, read before the Pike County Medical Society on April 19, 1955.

R. W. Allen, M.D., president of the Society presided. Twenty-eight members were present. Guests of the Society were G. B. Edmiston, M.D., Prestonburg, and T. M. Perry, M.D., Jenkins.

The meeting was adjourned at 9:30 p.m.

SCOTT

There were nine members in attendance at the regular monthly meeting of the Scott County Medical Society, June 2, 1955, at the John Graves Ford Memorial Hospital in Georgetown.

H. V. Johnson, M. D., secretary, submitted a bound volume of the report of the Public Relations Committee and also a report on the Medical Care of Indigent Cases, which will be submitted to the Kentucky State Medical Association this fall. These reports were discussed by the society.

J. C. Cantrill, M. D., president of the Society, appointed H. V. Johnson, M. D., as chairman of the Diabetic Committee.

H. V. Johnson, M. D., Secretary

SCOTT

The regular monthly meeting of the Scott County Medical Society was held on July 7 at the John Graves Ford Memorial Hospital, Georgetown, with seven members present.

J. Campbell Cantrill, M. D., president, reported that James Stith, M. D., Lexington, will read a paper at the August meeting, and that Robert Kinnaird, M. D., Lexington, would be with the group at the September meeting.

W. S. Allphin, M. D., C. R. Lewis, M. D., and J. C. Cantrill, M. D., were appointed as a committee to confer with the Scott County Fiscal Court in regard to opening the old part of the hospital.

The superintendent of the hospital, Mrs. Teagarden, reported that the laboratory would be open from 7:00 a. m. to 6:00 p. m., beginning July 18.

A motion was made and carried that the Cancer Clinic be brought to Georgetown in October.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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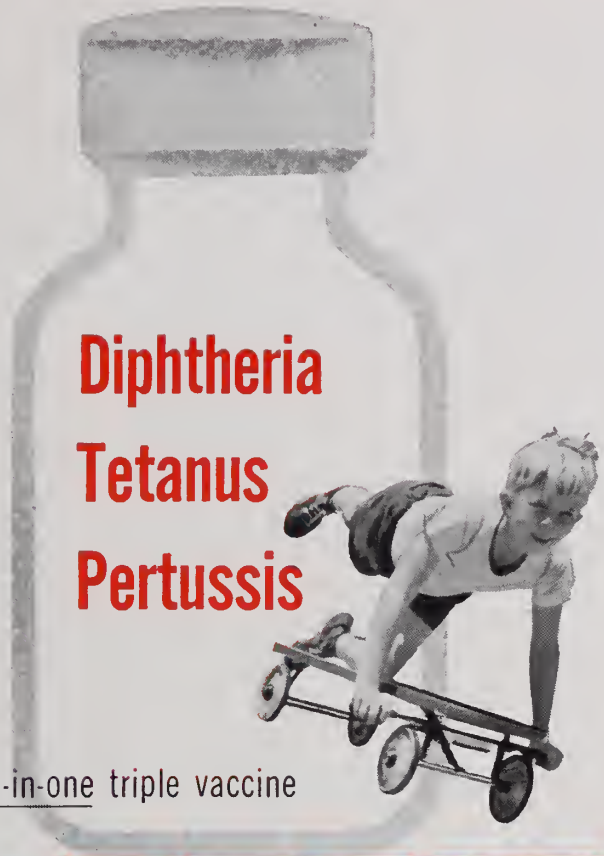

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1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* 19:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* 14:323, May 1950.

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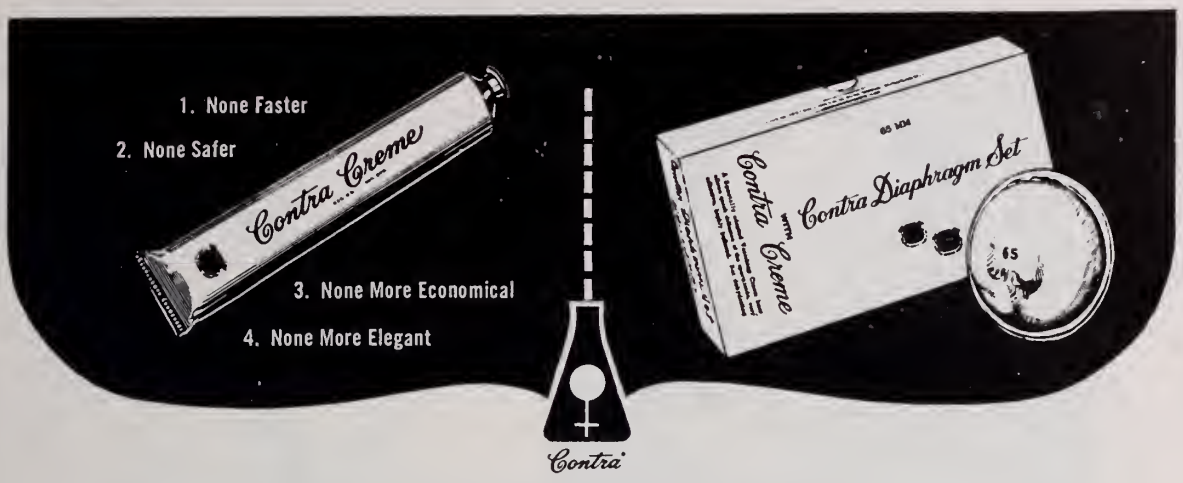

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1. James, W. F. B.: A Study Of A Simple Contraceptive Method For Clinic And Private Patients. West, J. Surg. Gyn & Ob., 59: 197, 1952. 2. Baker, J. R., Ranson, R. M. and Tynen, J.: A New Chemical Contraceptive, Lancet, P 882,, Oct. 15, 1938. 3. Report To The Council On Pharmacy And Chemistry Of The AMA: JAMA 148: 50, 1952. 4. Gamble, C. J. and Brown, R. L.: Relative Spermacidal Times of Commercial Contraceptives, Scientific Exhibit AMA Meeting, June, 1941. 5. Brown, R. L., Levenstein, I. and Becker, B.: The Spermacidal Times of Samples of Commercial Contraceptives Secured in 1942, Human Fertility 8: 65, 1943. 6. Becker, B. and Gamble, C. J.,: The Spermacidal Times of Samples of Contraceptives Secured in 1943, Human Fertility 9: 6, 1944. 7. Ibid: The Spermacidal Times of Contraceptive Jellies and Creams Secured in 1946, 11: 111, 1946. 8. New and Non Official Remedies, 1946.

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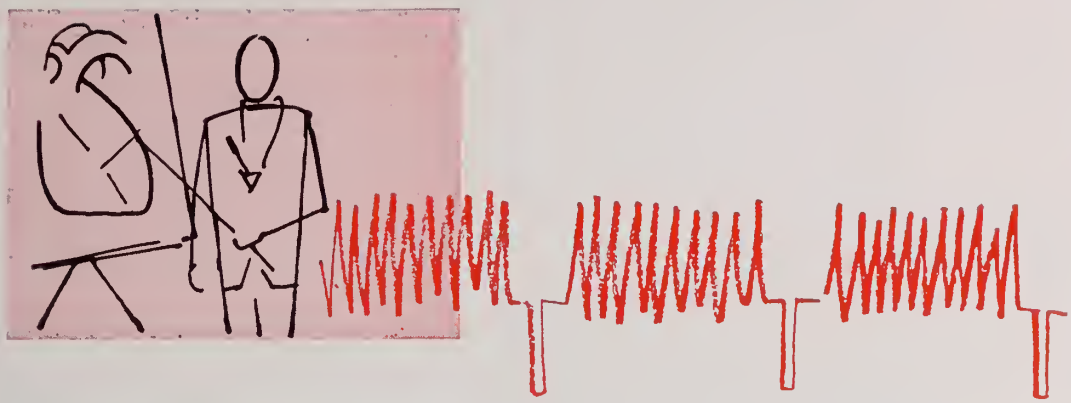

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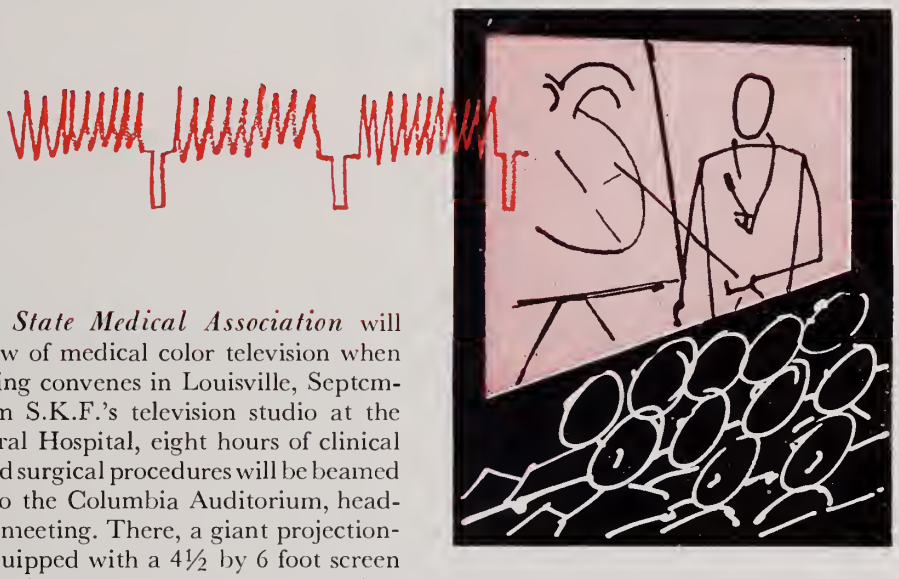

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MONDAY, OCTOBER 3, and TUESDAY, OCTOBER 4, 1955

MONDAY MORNING

Registration - 7:30 - 9:00 a. m.

Philip Thorek, M.D., Chicago, Illinois—"Intestinal Obstruction"

Edgar Hull, M.D., New Orleans, La.—"Emergency Use of Corticoids and Corticotropins"

George Pack, M.D., New York, N. Y.—"Carcinoma of the Breast"

Robert B. Greenblatt, M.D., Augusta, Ga.—"Use and Abuse of Endocrines in General Practice"

Arthur Curtis, M.D., Ann Arbor, Mich.—"Cutaneous Manifestations of Systemic Disease"

Lunch: 12:00 noon - 2:00 p. m.

MONDAY AFTERNOON

Brian Blades, M.D., Washington, D. C.—"Traumatic Injuries of the Chest"

Harry Bacon, M.D., Philadelphia, Pa.—"Anal and Rectal Lesions and their Treatment"

Philip Thorek, M.D., Chicago, Illinois—"The Peptic Ulcer Problem"

Waldo E. Nelson, M.D., Philadelphia, Pa.—"Pediatric Care by the General Practitioner"

QUESTION AND ANSWER PERIOD—Dr. Harry Bacon, Moderator

COCKTAIL HOUR: 5:30 - 6:30 p. m.

BANQUET: 7:00 p. m.—Speaker, John C. Krantz, Jr., Professor of Pharmacology, University of Maryland, "The Simplicity to Wonder." Honor Guest, Dr. Elmer Hess, Erie, Pa., President of American Medical Association.

TUESDAY MORNING

Alton Ochsner, M.D., New Orleans, La.—"Cancer of the Lung"

Thomas J. Dry, M.D., Rochester, Minn.—"Coronary Artery Disease"

Nicholas J. Eastman, M.D., Baltimore, Md.—"Complications of Pregnancy"

Elmer Hess, M.D., Erie, Pa.—"Management of Ureteral Calculi"

Edgar Hull, M.D., New Orleans, La.—"Manifestations and Treatment of Extra-intestinal Amebiasis"

LUNCH: 12:00 noon - 2:00 p. m.

TUESDAY AFTERNOON

J. Spencer Speed, M.D., Memphis, Tenn.—"Diagnosis and Treatment of Backache"

Sara Jordan, M.D., Boston, Mass.—"The Irritable Colon"

Charles A. Doan, M.D., Columbus, Ohio—"The Diagnosis and Treatment of Acute Leukemic States"

Alexander Brunschwig, M.D., New York, N.Y.—"Carcinoma of the Cervix"

QUESTION AND ANSWER PERIOD—Dr. Alton Ochsner, Moderator

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Alcohol	20%	

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Wednesday, September 21, 1955—Roof Garden

6:00 p. m. Social Hour
7:30 p. m. Trudeau Dinner—Presiding, Syney Jacobs, M. D., President
New Orleans, La.

Speaker: Oscar Auerbach, M. D., New York, N. Y.

Thursday, September 22, 1955 - 2:00 p. m.—South Room

TUBERCULOSIS AND THE GENERAL PRACTITIONER

Presiding, William N. Peck, M. D., McCain, N. C.
Case Finding in the Office—Maurice Campagna, M. D., New Orleans, La.
Primary Tuberculosis—E. L. Kendig, Jr., M. D., Richmond, Va.
Tuberculosis and Pregnancy—Hollis Johnson, M. D., Nashville, Tenn.
When is Sanatorium Care Imperative—H. Stuart Willis, M. D., Chapel Hill, N. C.
When is Home Care Permissable—Adam Miller, M. D., Lexington, Ky.

Thursday, September 22, 1955 - 8:00 p. m.—South Room

CONSECUTIVE CASE CONFERENCE (Pembine Type)

Presiding, John Harter, M. D., Louisville, Ky.

Friday, September 23, 1955 - 9:30 a. m.—South Room

PROBLEMS IN CHEMOTHERAPY

Presiding, Robert K. Oliver, M. D., Montgomery, Ala.
Drug Reactions—Spurgeon Wingo, M. D., New Orleans, La.
Treatment Failures—Lynn L. Johnsen, M. D., McCain, N. C.
Optimum Duration of Chemotherapy Before and After Surgery—
William S. Schwartz, M. D., Oteen, N. C.
Persistent Cavitation after Sputum Conversion—
Dwight Danburg, M. D., Greenwell Springs, La.

Friday, September 23, 1955 - 2:30 p. m.—South Room

NON-TUBERCULOUS DISEASE

Presiding, Charles P. Cake, M. D., Arlington, Va.
Fungus Disease as a Consideration in the Differential Diagnosis of Pulmonary Disease—
Daniel L. Pickar, M. D., Louisville, Ky.
Bronchography with New Contrast Media—David Waterman, M. D., Knoxville, Tenn.
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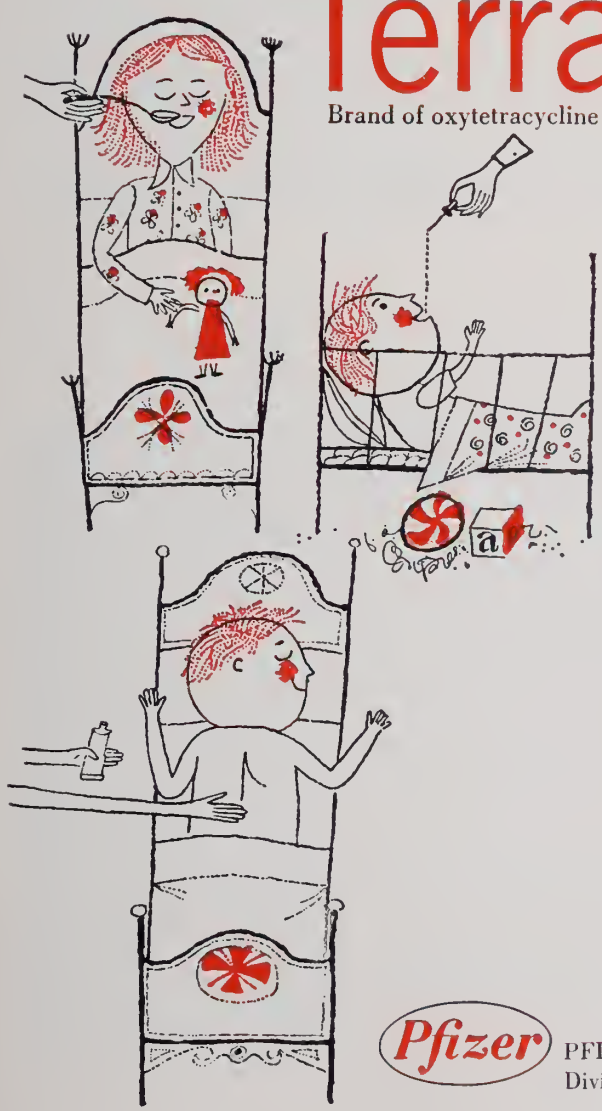

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*Farley, W. J.: Oxytetracycline in Pediatrics, Internat. Rec. Med. *168*:140 (March) 1955.

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Meat...

and Biologic Facts of Protein Metabolism

The classical work of Cannon and his associates* in the field of protein metabolism has contributed significantly to our knowledge of the biologic utilization of protein. It has established that the dietary absence of a single amino acid quickly changes the direction of metabolic activity from anabolism to catabolism. Apparently all the nonessential amino acids play some part in sparing the essential amino acids, and all may be regarded as indispensable for optimal nutrition. It has been suggested "that for maximal tissue-utilization of amino acids at least twenty per cent of the total dietary nitrogen should come from other sources than essential amino acids."

In undernourished subjects the maintenance requirement for each essential amino acid is much greater—two to almost five times greater—than in healthy subjects.

Although an optimal caloric intake facilitates optimal utilization of amino acids, a reducing regimen need not curtail full utilization of these nutrients. It has been shown that a useful degree of amino acid utilization can be attained with caloric intake considerably below the optimal.

Minerals appear to be important in the process of amino acid metabolism. Evidence indicates that either phosphate or potassium deficiency might adversely influence amino acid utilization. Absence of either ion from experimental depletion rations leads to depression of appetite and slowing of the processes of protein repletion.

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*Cannon, P. R.; Frazier, L. E., and Hughes, R. H.: Factors Influencing Amino Acid Utilization in Tissue Protein Synthesis, in Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Inc., 1954, pp. 55-90.

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

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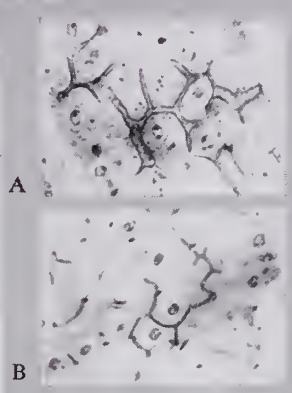

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(1) Clara, M.: Med. Monatsschr. 7:356, 1953. (2) Brauer, R. W., and Pessotti, R. L.: Science *115*:142, 1952. (3) Schwimmer, D.; Boyd, L. J., and Rubin, S. H.: Bull. New York M. Coll. *16*:102, 1953.

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(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

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VOL. 53 OCTOBER, 1955 NO. 10

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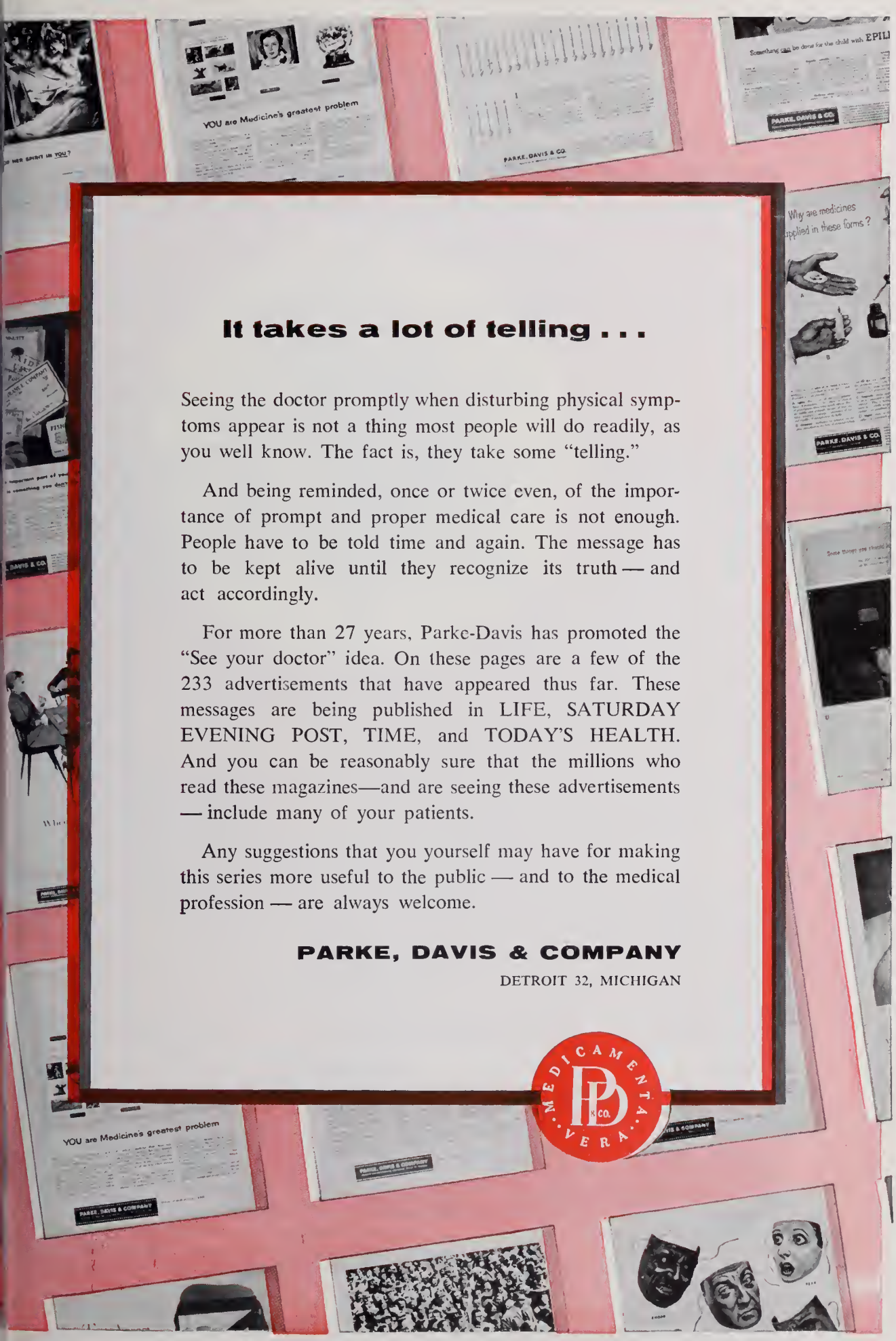

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J. Vernon Pace, 709-10 Citizen's Bank Bldg., Paducah ..... Chairman of the Council
Delmas M. Clardy, Hopkinsville ..... Vice-Chairman of the Council

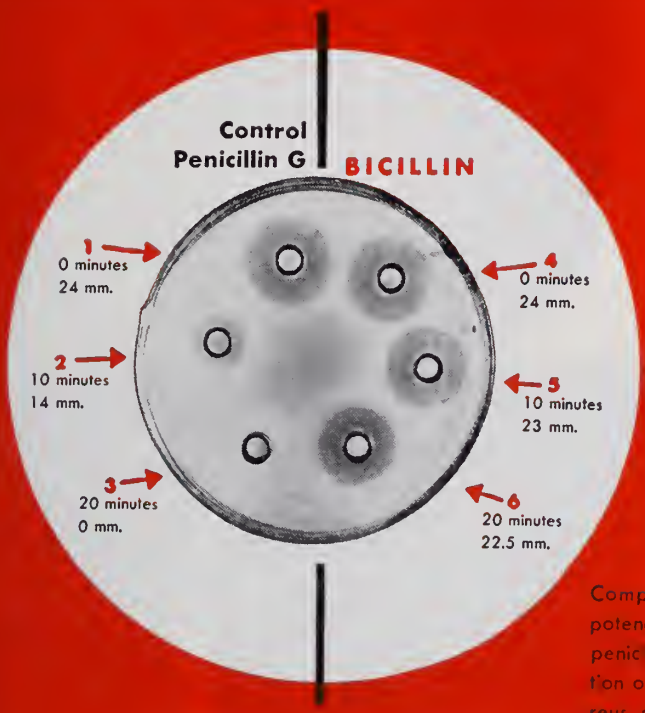
DELEGATES TO THE A. M. A.

	Term Expires
Bruce Underwood, 620 S. Third Street, Louisville	1955
Coleman Johnston, 211 W. Second Street, Lexington (Alternate)	1955
W. Clark Bailey, Harlan	1956
W. Vinson Pierce, 33 E. Seventh St., Covington (Alternate)	1956

COUNCILORS

		Term Expires
First District	J. Vernon Pace, 709-10 Citizens Bank Building, Paducah	1956
Second District	Walter L. O'Nan, 700 N. Elm St., Henderson	1958
Third District	Delmas M. Clardy, Hopkinsville	1956
Fourth District	W. Keith Crume, Bardstown	1956
Fifth District	Carlisle Morse, 3612 Lexington Road, Louisville	1957
Sixth District	L. O. Toomey, 544 E. Main St., Bowling Green	1957
Seventh District	Branham B. Baughman, 401 W. Main St., Frankfort	1958
Eighth District	Edward B. Mersch, 92 Arcadia, Covington	1957
Ninth District	J. M. Stevenson, Brookville	1958
Tenth District	J. Farra Van Meter, 183 N. Upper Street, Lexington	1958
Eleventh District	Hugh Mahaffey, Richmond	1957
Twelfth District	Garnett J. Sweeney, Liberty	1956
Thirteenth District	Charles B. Johnson, Russell	1958
Fourteenth District	John Archer, Prestonsburg	1956
Fifteenth District	Charles B. Stacy, Pineville	1957

Entered as second-class matter, Oct. 22, 1906, at the Post Office at Bowling Green, Ky., under act of Congress, Mar. 3, 1897. Acceptance for mailing at special rates postage provided in Section 1103, act of Oct. 3, 1917, authorized May 25, 1920.



Comparing antibacterial potency of two unbuffered penicillins. Zones of inhibition of Staphylococcus aureus, strain 209 P.

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1. American Medical Association: New and Non-official Remedies. J. B. Lippincott Co., Philadelphia 1954, p 147

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for
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Q. What are some of the advantages of ACHROMYCIN?

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Rapid diffusion and penetration.
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Q. Exactly how broad is the spectrum of ACHROMYCIN?

A. It has proved effective against a wide variety of infections, caused by Gram-positive and Gram-negative bacteria, rickettsia, and certain viruses and protozoa.

Q. In what way are ACHROMYCIN Capsules advantageous?

A. For rapid and complete absorption they are dry-filled, sealed capsules (a Lederle exclusive!) No oils, no paste...tamperproof.

Q. Who makes ACHROMYCIN?

A. It is produced -- every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

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President's Page

On this my primal page as president, I shall ask you to permit my pen to rake the embers of memory to bring forth wonderful living and today-pertinent concept which I learned as a youth, translating the ETHICS of Aristotle.

The old Grecian philosopher taught that citizens— all— had a right to share in the good things of the state—food, shelter, clothing, heat, light and freedom. But, mark you, this right was NOT IN MATHEMATICAL PROPORTION. He did not take the census (160,000,000 Americans) and divide it into the totality all state productivity. By no means.

This right was apportioned according to the MERIT of each citizen, and the value of what he contributed to the state of Attica. No communism in this thinking. The citizen, like Jonas Salk, who made a magnificent and breath-taking contribution, shared larger in every way than the sun-sitter and listener on the steps of the classic columned Acropolis.

This was and is individual enterprise as we believe it, a concept ever old and ever new and ever true. Take this ember I here give you. Blow upon it with the breath of your daily practice and your other contacts with the public. Stir it to blaze into warmth and glow in all our public relations.

Let us make our contributions so worthwhile as doctor and citizen in our own communities, so immediately effective for betterment that we may carry forward undiminished the heritage of the Healing Art that has belonged to us since the childhood of man.

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DESTROYS ENTEROCOCCI

This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enteracoccic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

specific against coccic infections

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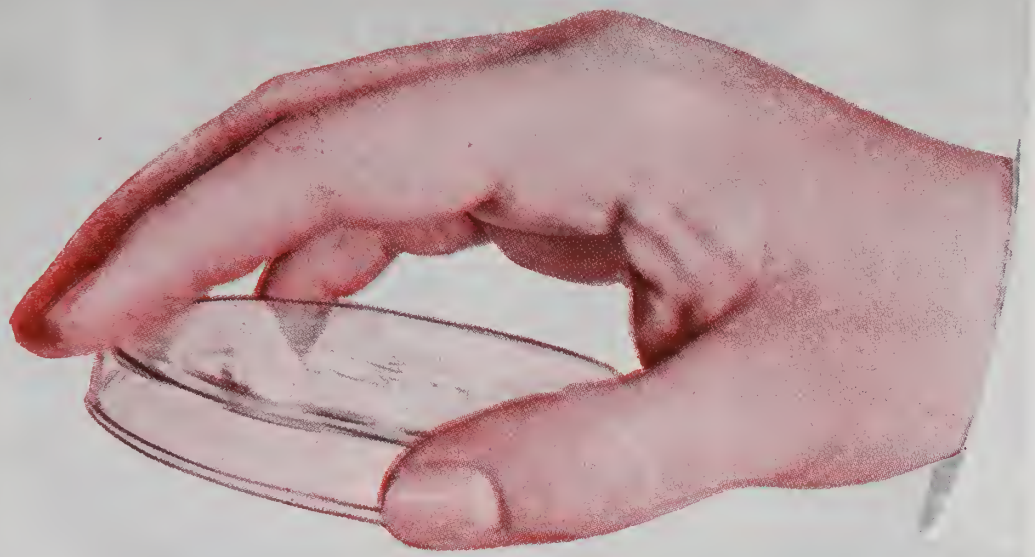

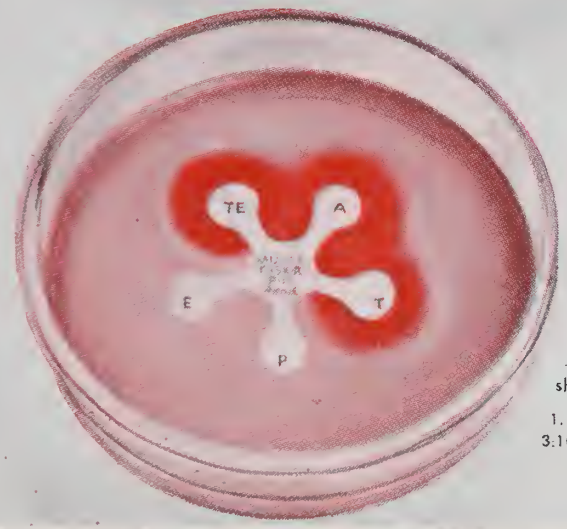

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This sensitivity test shows ERYTHROCIN and the same antibiotics against a typical intestinal strain of *E. coli*. Note that ERYTHROCIN and penicillin do not affect this gram-negative organism—although the other antibiotics show marked inhibitory action.

1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

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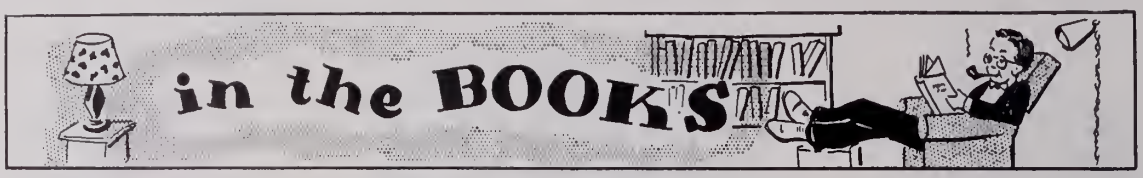


COMMUNICABLE DISEASES: by Franklin H. Top, M.D., M.P.H., F.A.C.P., F.A.A.P., F.A.P.H.A., and Collaborators, the C. V. Mosby Company, 1955, 3rd Ed. 1208 pages. $18.00.

After eight years absence of a new edition, the third edition of this well known textbook on communicable diseases is welcomed. The introductory discussion on infection and immunity leaves little to be desired, as it is a very competent, well written, and concise description of the factors known about infection and immunity today.

The description of the usual childhood illnesses of measles, mumps, whooping cough, and chicken pox should be standard reading for all medical students and is excellent for the busy practitioner in reviewing his own knowledge regarding these diseases. The book has grown approximately two hundred pages from the second edition, and in general, is a desirable addition to anyone's library. The photographic reproductions, however, are too few, and the color reproductions are only fair.

The new section on antibiotics is excellently done, and the bibliography well organized according to the antibiotic that is being discussed. The addition of the chapter on Cat-Scratch Fever is a welcome one, as it is the first attempt known to the reviewer of bringing together the known facts about this interesting and clinically important disease

The section on histoplasmosis is generally a repetitious one that has been seen in all current pediatric textbooks. It is also worth pointing out that the bibliography of this section includes the references up to 1950 only. Incidentally, this is a general criticism of the whole book. However, the sections on antibiotics, brucellosis, anthrax, cat-scratch fever, and rheumatic fever are notable exceptions to this rule.

Joseph Little, M. D.

THE BIOLOGIC EFFECTS OF TOBACCO: Ed. by Ernest L. Wydner, M.D., Head, Section of Epidemiology, and Associate, Sloan-Kettering Institute for Cancer Research. 215 pp., $4.50. Boston and Toronto: Little, Brown and Co., 1955.

This book represents the joint endeavor of several authors to summarize the available knowledge, both clinical and experimental, of the biologic effects of tobacco. Joseph Garland, Editor of the New England Journal of Medicine, wrote the Foreword. There are seven chapters each written by an authority in the field. They include: Chemistry, by Alvin I. Kosak; Pharmacology, by Charles J. Kensler; The Cardiovascular System, by Ellen McDevitt and Irving S. Wright; Neoplastic Diseases, by Ernest L. Wydner; The Gastrointestinal Tract, by Robert C. Batterman; Allergy, by Francis C. Lowell, and Cause and Effect, by E. Cuyler Hammond. There is an author index and subject index. The bibliography includes over four hundred entries.

One can find little data in this work to recommend tobacco for the health of the consumer. In spite of this, many producers of the product ignore scientific data to the coronary, and claim it to be harmless. The socio-economic aspects of the problem are especially acute in tobacco producing states such as Kentucky, nonetheless as physicians we are obliged to accept the responsibility of making honest recommendations to our patients. If one is prone to rely on statistics to establish cause and effect relationship, such figures are available, not only for bronchiogenic carcinoma, but for coronary artery disease and longevity as well. For those requiring clinical data on the effect of tobacco, such data are found in the book. To those who would ignore clinical data and statistics, the chapters on Chemistry and Pharmacology will provide fruitful reading.

The book is recommended to anyone who might be requested to counsel patients concerning the use of tobacco, as well as those who would like to be brought up to date on the problem.

William Christopherson, M. D.

POMP AND PESTILENCE, INFECTIOUS DISEASE, ITS ORIGINS AND CONQUEST: by Ronald Hare, M.D. The Philosophical Library Inc., New York. 224 pages: $5.75.

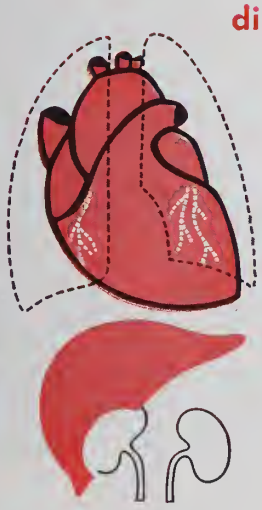
The war between man and his parasites is a long-standing struggle, not yet concluded. In **Pomp and Pestilence** Ronald Hare, M.D., Professor of Bacteriology at London University traces the origins and control of infectious disease.

Introducing the subjects he discusses the

(Continued on page 846)

does your diuretic cause acidosis?

know your diuretic



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IN THE BOOKS

(Continued from page 844)

nature of the various host-parasite relationships. This section of the book is rather elementary for the physician-reader but perhaps too technical for the reader not versed in biologic science.

The greater part of the small volume is devoted to an account of the great epidemics and pandemics of the past—smallpox, bubonic plague, cholera, typhus, etc. A rather detailed discussion of the contemporary thinking with regard to causation of these pestilences is included, as well as mention of many unsuccessful attempts at control. Growing knowledge of the transmissible nature of the infectious diseases led to more effective control measures—sewage disposal systems, safe water supply and other sanitary measures.

More recent developments in the control of infectious disease, the discovery of means of immunization and the development of effective chemotherapy and antibiotics, are disposed of by Dr. Hare in fewer than a dozen pages.

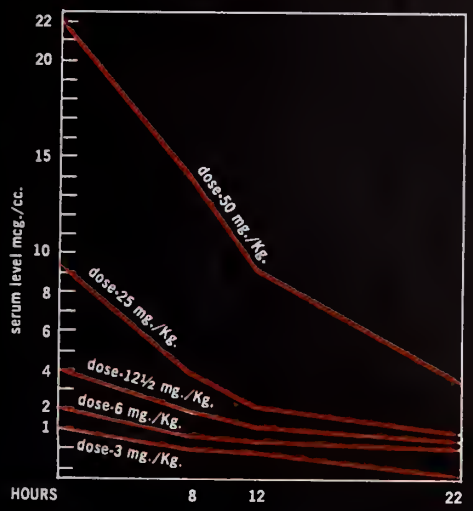
For the student of history, **Pomp and Pestilence,** with its fifteen pages of references, should be informative. For the physician, Dr. Hare's work serves to give perspective to the present battles in the war between man and his parasites.

Charles H. Duncan, M. D.

Hiram W. Jones, Chicago, resigned August 31 as Executive Secretary of the American Education Foundation, and has accepted a position as assistant to the President of Diagnostic and Treatment Building Corporation of America. John W. Hedback, associate executive secretary, will act as Executive Secretary of the Foundation until future organization can be decided upon.

The New York Medical College and the Flower and Fifth Avenue Hospitals have announced a post graduate course in pediatric allergy, to be held on Wednesdays, November 2, 1955, through May 31, 1956, under the direction of Bret Ratner, M.D., professor of clinical pediatrics and associate professor of immunology. Applicants must be certified in pediatrics or have the requirements for certification. Apply: Office of the Dean, New York Medical College, Fifth Avenue at 106th Street, New York 29.

Mean Serum Levels After Intramuscular Injection of Terramycin.



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O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.

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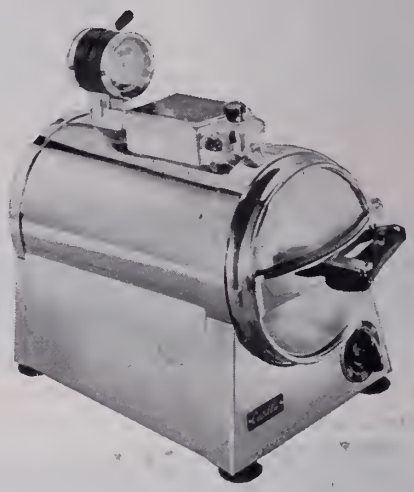

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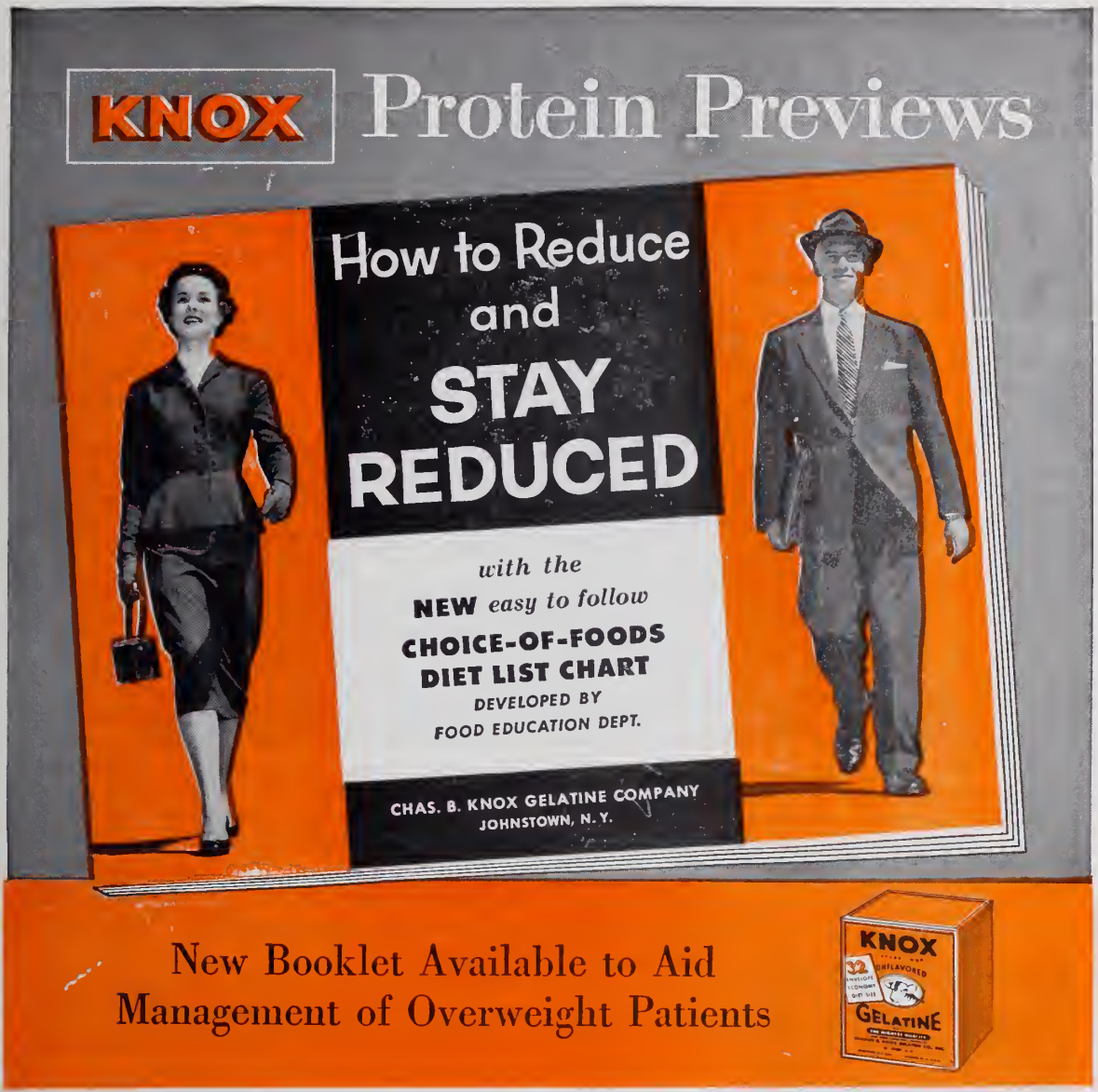

The 1955 edition of the well-known Knox "Eat-and-Reduce" booklet eliminates calorie counting for your obese patients. This year's edition is based on the use of Food Exchange Lists[1] which have proved so accurate in the dietary management of diabetics. These lists have been adapted to the dietary needs of patients who must lose weight.

The first 18 pages of the new booklet present in simple terms key information on the use of Food Exchanges (referred to in the book as Choices). In the center, double gatefold pages outline color-coded diets of 1200, 1600, and 1800 calories based on the Food Exchanges. Physicians will find these diets easy to revise to meet the special needs of individual patients.

To help patients persevere in their reducing plans, the last 14 pages of the new Knox booklet are devoted to more than six dozen *tested*, low-calorie recipes. Please use the coupon below to obtain copies of the new "Eat-and-Reduce" booklet for your practice.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Assn., Inc. and The American Dietetic Assn.

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Johnstown, N. Y.

Please send me____copies of the new illustrated Knox "Eat-and-Reduce" booklet based on Food Exchanges.

WASHINGTON NEWS DIGEST

Washington, D. C.—Although Salk vaccine now is coming from the laboratories in encouraging volume, in Washington there still are unresolved questions that may well go beyond the problem of controlling poliomyelitis.

After months of wrangling, Congress this year enacted only one law dealing with the new vaccine. This was an authorization for the allocation of money to states to help finance inoculation campaigns. On this there was a sharp difference of opinion. Some lawmakers wanted to give federal money, but to earmark it for the exclusive use of children who had passed the "means test," that is, whose parents had been officially determined to be unable to pay for the shots. Others would have nothing to do with a bill carrying the "means test."

As finally enacted, the law provides enough money to buy vaccine for only approximately one-third of all children under 20 and pregnant women. That is a concession to those who want a "means test." But the "no-means test" faction was appeased by another provision of the law, a stipulation that in inoculation programs arranged by the state and communities no financial questions could be asked.

It may be that this decision will be final, that Congress will have nothing more to do with this complicated problem, except possibly to add to the 30 million dollars already appropriated to pay for vaccine. But that isn't the way some members of Congress feel. They want to reopen the entire question before the present law expires next February 15. At the very least, these Senators and Representatives want Congress to vote enough money to buy shots for all children in the eligible ages. In fact, those who want the federal government to play a larger role in inoculation programs regard the law now on the books as merely a temporary measure. They are looking forward to reopening the issue.

If this is done, the many questions that the last session couldn't decide again will be before Congress. Here are some of them:

1. Is it the responsibility of the federal government to make free shots available to all, regardless of ability to pay?

2. If there is to be a "means test," should the states or the federal government set the dividing line between the families that can pay and those that can't?

3. Should the federal government move into the picture and allocate the available vaccine, or should distribution continue along the present voluntary lines?

4. Should the states and communities arrange for all inoculations themselves?

Underlying these questions are some issues that go beyond Salk vaccine. Some persons in Congress believe there should be no limit to the participation of the federal government in public health programs. They would like to see free inoculations not only for poliomyelitis but also for all other communicable diseases for which there is a specific vaccine.

Also, the rambling system of federal control over drugs, with enforcement spread among half a dozen departments and agencies, is under criticism. Some leaders in Congress believe the whole area of federal drug control should be surveyed, and possibly more clear-cut lines of enforcement laid down. One bill on this subject—which was not pressed last session—would give the Secretary of the Department of Health, Education, and Welfare authority to move in and assume control over the distribution and even the use of any drug when the Secretary decided that the public welfare warranted such drastic action.

NOTES:

During the current fiscal year the U. S. will be spending a total of over 32 million dollars to help in vocational rehabilitation work, most of it in the form of grants to states.

In exchange for patent rights, colleges and laboratories will receive some financial concessions from the Atomic Energy Commission in purchase of nuclear materials and equipment.

From now on Air Force physicians, when addressed verbally, will be called "doctor." The military rank and title will continue to be used, however, in written communications.

The Department of HEW's many medical research programs are being scrutinized by a special committee set up by the National Science Foundation. In originally suggesting the study, former HEW Secretary Hobby said the time had come to re-evaluate the extent of federal medical research. Final findings will be turned over to HEW Secretary Marion B. Folsom.

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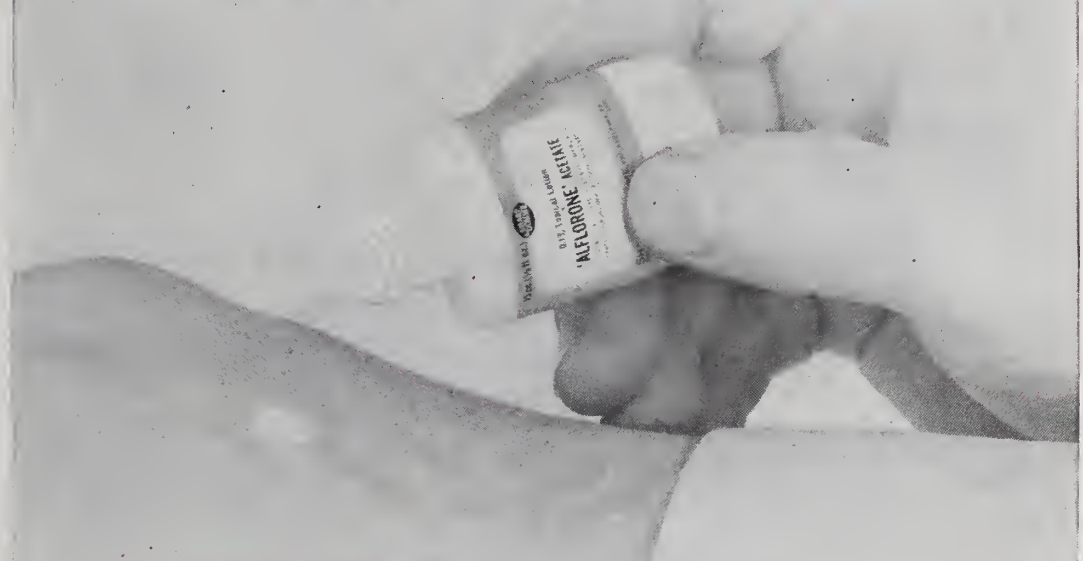

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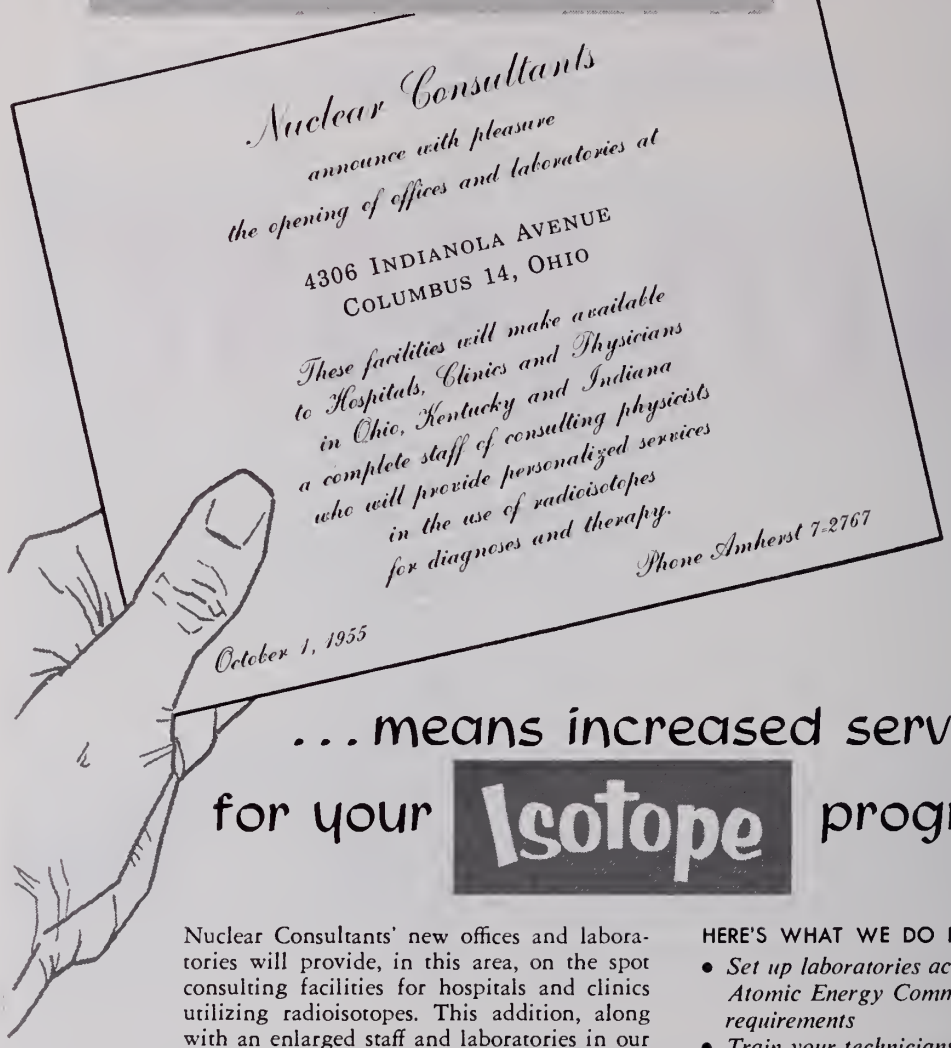

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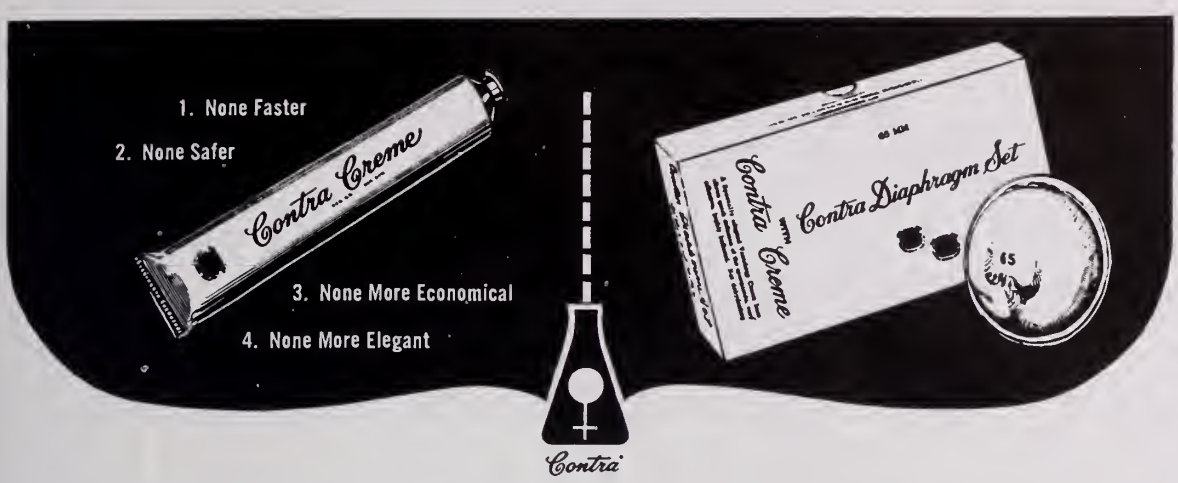

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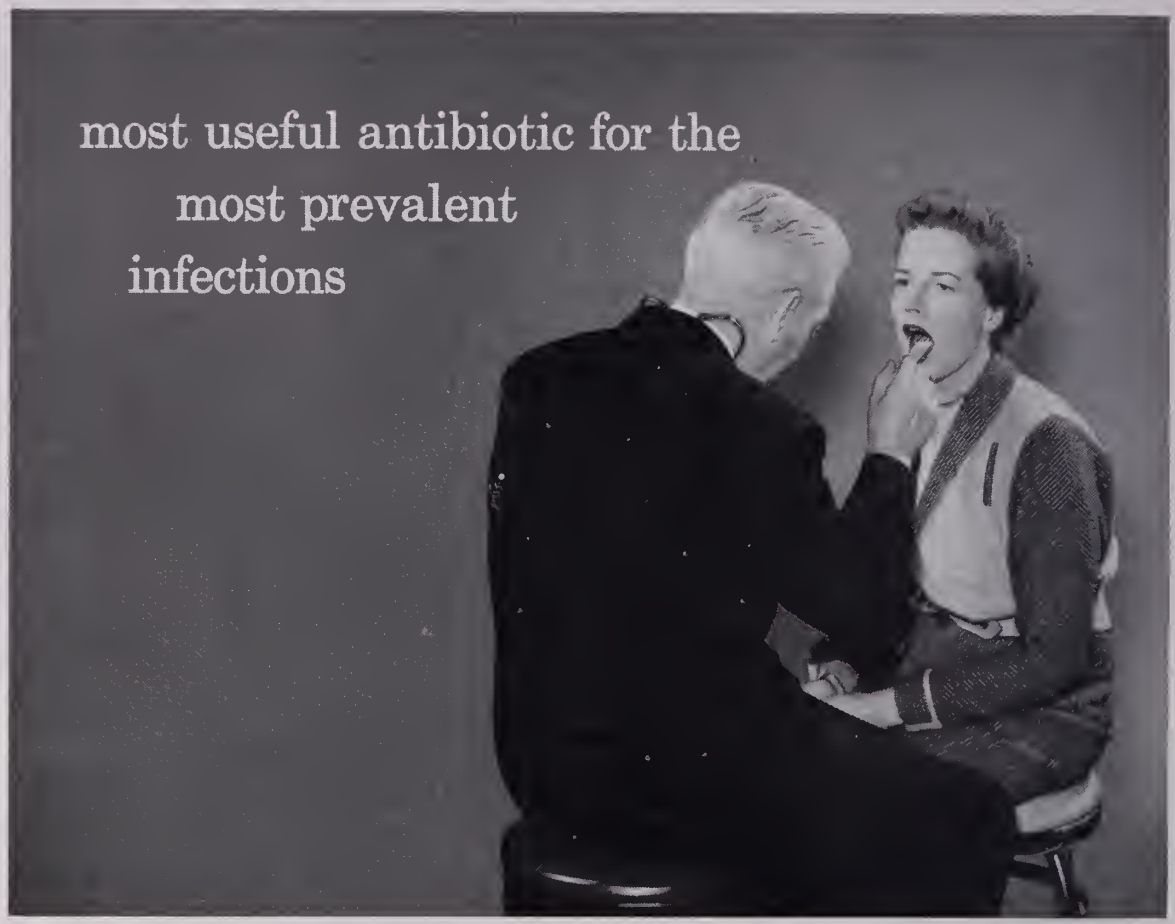

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VOL. 53 OCTOBER, 1955 NO. 10

Detection and Diagnosis of Diabetes

FRANKLIN B. MOOSNICK, M. D.

Lexington

Diabetes Detection Week

During the week of November 13-19, 1955, the search to uncover a million unknown diabetics will be undertaken by the national Diabetic Detection Week program. In Kentucky, for the fourth consecutive year, this program is being sponsored by the Kentucky State Medical Association and the component county societies. If the scope of the program continues to grow as it has in the past during this drive more than 50,000 Kentuckians will be tested, and approximately 225 new Kentucky diabetics will be discovered.

As the result of reliable and repeatedly confirmed surveys made in various parts of the country, it has been found that there are as many undetected diabetics as there are known cases in the community. The Diabetes Detection Drive, in its week-long program, has as one of its functions that of case finding, to uncover these patients, who number at least one million throughout the nation.

Other objectives of this drive fall under the heading of information and education. Many known diabetics who have been lax in their control are inspired to stop neglecting themselves and return to medical supervision and good control. Diabetics, their families, and the general public learn to understand diabetes better as the result of sound and authoritative information released during the drive. Consequently, employment, insurance, and other public attitudes are cultivated more intelligently, and even the diabetic himself is relieved of some psychic trauma.

Family Physician's Role In Diabetes Detection

Notwithstanding any detection drives or case-finding programs, which at best can represent only an intensification of a continuous effort, the greatest case finder we have is the family physician, particularly if he is on the alert for conditions and situations frequently associated with diabetes. In dealing with the families of diabetic patients, with obese, in situations of physical and psychic stress, and following acute infectious diseases, the physician is in contact with patients in situations wherein diabetes is most apt to become manifest. By maintaining a high index of suspicion in these situations, a mild diabetic patient is apt to be discovered by proper search. And through the early recognition of the disease, the patient gains the benefit of early control of his illness.

Heredity In Diabetes

Among the families of diabetics, the search for diabetes should be constantly and carefully made, and repeated at regular intervals. For example, it has been reported that true diabetes has been observed in 11% of children born to diabetic mothers, equivalent to 225 times oftener than occurs in the general population of like age.

It has now been clearly established that the diabetic tendency is inherited as a simple Mendelian recessive trait, following all the laws of heredity in a straightforward fashion. Thus, if we have both parents diabetic or potentially so, all the

offspring will be predisposed to this disorder. On the other hand, if both parents are non-diabetic but are carrying the trait which they received from their parents, one-fourth of the children will be diabetic.

If "D" represents the normal gene, and "d" represents the gene leading to a susceptibility to diabetes, a person who is neither diabetic nor carries the trait would have a gene structure of "DD"; a person who is non-diabetic yet carries the trait would have a gene structure of "Dd"; a person who is diabetic or potentially so would have a gene structure of "dd". From this, we may list the possible matings as follows:

Both parents non-diabetic, yet carrying the trait;

Dd x Dd: ¼ of children predisposed

One parent diabetic; other non-diabetic yet carrying the trait;

dd x Dd: ½ of children predisposed

Both parents diabetic (or predisposed);

dd x dd: All children predisposed.

In view of possible differences in provoking factors and because the age at which the disease makes its appearance is so variable, it may seem difficult to apply these theoretical considerations to any given family situation. However, as the average age of the population increases, more and more prediabetics will have time to manifest their diabetes, and the prevalence of frank diabetes must continue to increase, as undoubtedly it has in the last few decades.

Though the incidence of known diabetes is approximately 1% of the population, it has been computed that people having a "dd" gene distribution, which includes persons classed either as diagnosed, undetected, or potential diabetics, constitute at least 5% of the population.

Obesity and Diabetes

Another group of patients in which the search for diabetes should be carried out repeatedly is the obese, among whom the importance of a relationship with diabetes has been long recognized. While no one would presume to argue that obesity alone causes diabetes, nonetheless, it is true that about 80% of all new diabetics are definitely overweight at the onset of their disease. This correlation applies only to adult diabetics, and is particularly applicable to the older diabetic. It is a common experience to find that older diabetic patients regain their ability to properly metabolize carbohydrates even to the point of seeming in apparent remission after reduction in weight. This might perhaps indicate that their diabetes is present only in association with a caloric intake in excess of their needs. Numerous explanations as to why this occurs have been forwarded, though none seems fully valid. A simple explanation which may suffice for the moment is that it is possible that increased demands on the insulin mechanism are incurred by the conversion of large amounts of carbohydrate to body fat in the obese patient, and that in a potential diabetic patient this may result in a "Pancreatic strain" which gives a clinical picture of diabetes.

Infections And Diabetes

Another situation in which the possibility of diabetes must be kept in mind, is in relationship to infections. Most physicians are quite alert to the possibility of diabetes being present in the patient presenting himself with recurrent bouts of furuncles or carbuncles. But less familiar is recognition of the fact that latent diabetes may become evident in the course of any febrile illness, or immediately following it. Whether it be due to the stress reaction mechanism wherein increased elaboration of body cortico-steroids aggravates the diabetic picture, whether it be due to increased metabolism associated with the fever and infection, or perhaps due to some blocking of insulin formation or activity, there is no doubt that it does occur, and must constantly be held in mind in every febrile illness.

Illnesses Associated With Diabetes

In addition to these common causes or associations, there are a number of illnesses and conditions in which coincident occurrence of diabetes exists with greater frequency than in the general population, and consequently its existence should be considered and ruled out. Vascular degenerative disease, especially angina pectoris, or electrocardiographic deviations from normal occurring in younger individuals should always be viewed with the suspicion that perhaps there is related diabetes. A similar attitude should be held toward all trophic ulcers and cases of gangrene.

In the female, menstrual irregularities, history of fetal death in past pregnancies, or delivery of a very large baby should signal the need for search for diabetes. On the other hand, bizarre growth patterns in a youngster may make us wish to

check back on the glucose tolerance of the mother as well as on the child.

The association of retinitis and cataract formation with diabetes is well recognized, but one should regard with equal suspicion a history of rapid alteration in vision, or failure to obtain or maintain satisfactory refraction. Peripheral neuritis, not otherwise explained, may likewise not uncommonly be due to diabetic origin.

Though none of these illnesses are pathognomic of diabetes in themselves, they represent a zone of contact which the physician makes with a group of patients in whom the "high index of suspicion" must be entertained. Only by entertaining this point of view, and following up on it, will the diagnosis of diabetes be made early and with a high level of frequency.

Diagnosis

So far as diagnosis goes, testing the urine for sugar still remains the simplest, easiest and most inexpensive method for case finding in diabetes. Quite aside from the patient who presents himself with the classical symptoms of diabetes, or the patient seen for the first time in acidosis or with some complicating illness suggesting the possibility of diabetes, the finding of sugar on a routine urinalysis most commonly brings the diabetic patient to the attention of the physician for the first time. Certainly performing a routine urine examination on all new patients and on yearly check-up would be the greatest type of case finding program which could be devised. But in this connection it is interesting that the urine most frequently tested is the fasting specimen. It is a strange fetish, indeed, which makes physicians use a specimen for testing which is the one least apt to show sugar. A specimen collected about two hours after a heavy carbohydrate meal is most apt to show sugar, and it is this type of specimen which should be used for any screening test.

If the urine shows sugar, regardless of amount, confirmation of diabetes is in order, and is based upon the blood sugar determination.

An elaborate program of confirmation is not at all necessary. The majority of cases can be confirmed merely by testing the blood sugar two hours after a full carbohydrate meal. If a level below 120 mgm% is found, diabetes can be excluded. Conversely, if a blood sugar level one hour after a full meal is greater than 200 mgm%, the diagnosis of diabetes can be considered established. It is only in the few cases that fall between these extremes that we need to resort to a full glucose tolerance test, inasmuch as these tests bring out the salient information ordinarily sought. The highest level to which the sugar rises after carbohydrate ingestion is shown in a one hour specimen and normally should be less than 170 mgm%. The speed with which the blood sugar stabilizes to normal is indicated by the two hour specimen and should be less than 120 mgm%.

It may be pointed out here, that the fasting blood sugar may be quite misleading in discovery or confirming diabetes. In many mild or moderate diabetics, while the normal body production of insulin may prove inadequate for daily needs, it may be enough to reduce the blood sugar to normal in a slow fashion in the eight to 12 hours which elapsed since the last food was taken. By testing the urine for sugar at the time blood sugar determinations are run, the level of the renal threshold at which sugar is passed into the urine can be established and those cases of renal glycosuria can be ruled out. But even with alterations in the blood sugar determination, the physician must keep in mind that other conditions may cause these changes, though rarely to the same degree as in the true diabetic. Examples of altered glucose metabolism may be found in hyperthyroidism, inactivity, nephritis, pregnancy, diseases of the liver, pituitary, and adrenals. Of increasing importance along this line is obtaining a history regarding possible use of cortico-steroids, which, by producing a picture of adrenal overactivity, may cause hyperglycemia and temporarily simulate true diabetes.

After Detection, What?

During the Diabetes Detection Week, approximately 225 new diabetics will be found in this state through the drive, in addition to which will be many others discovered by physicians in their private practices. And at this point we might do well to stop and ask ourselves several pertinent questions. Are we as a profession really ready for such a Drive? Is our care and follow-up of these patients really good enough so that we can presume to search out new cases for our supervision? Are we fulfilling our obligations to the patient?

We should search ourselves most critically at this point and ask further: are we training the diabetic patient adequately

in the technical phases of his disease which he needs to know for daily care, inasmuch as he must live with this disease for the rest of his life? Will he have a practical understanding of diabetes and how it may affect his future? Does he know how to recognize and prevent diabetic acidosis? Has he been made to appreciate the importance of good control, and the role it plays in this complicated story? Do we as physicians take the trouble to understand him as a person, to know his worries and his home environment, and, with this information as a background, do we then help him develop an attitude which will smooth the rough spots of his lifetime with diabetes?

Until we can answer these questions in the affirmative we are failing in our care of the diabetic patient; we are failing to fulfill our obligations to the diabetic patient. And as a consequence we will fail in our efforts to achieve our ideal objective —to secure for the patient a long and comfortable and useful life.

Infant Urology in General Practice*

ROBERT LICH, JR., M.D.**

Louisville

Urological problems in the infant are not uncommon. However, these conditions are not always apparent and may be easily overlooked. It is for this reason that we are going to review some of these urological problems and discuss some of the newer concepts of diagnosis and treatment.

Circumcision

The most common urological condition in infancy is the redundant prepuce. The answer to the question as to whether or not a routine circumcision should be practiced is a simple one; namely, every male infant should be circumcised during the first week of life.

The presence or absence of an easily retractile prepuce does not influence this dictum. It is the automatic cleanliness associated with a properly executed circumcision that is the important consideration. The smegma bacillus that normally inhabits the coronal sulcus is known to have carcinogenic properties. This has been shown experimentally and clinically. The striking clinical example being the absence of adult penile carcinoma in the infant circumcised; whereas if circumcision is not accomplished until after infancy there does not exist a similar degree of immunity from cancer of the penis. Furthermore, the relative absence of cervical cancer in women married to circumcised males is more than coincidental. This has been long recognized in the Jewish race, and recently Ernest Windner has demonstrated rather conclusively the distinctly higher incidence of cervical carcinoma in women married to uncircumcised men. In the light of these observations it appears reasonable that routine infant circumcision should be mandatory.

Circumcision is an important operation. If you have any doubt of this, I suggest you review some of the judgments that have been handed down by the courts in suits dealing with this operation. Hence. this operation should not be relegated to the lowest man on the surgical totem pole and treated with disdain and disinterest. The four hazards that must be expertly avoided are: 1) injury to the glans, 2) residual ragged preputial tissue, 3) incomplete freeing of the prepuce from the glans and 4) inaccurate hemostasis.

Urethral Meatal Stenosis

The second most common urological condition in the infant is urethral meatal stenosis, which is much more common in the male than in the female, though it may occur in either sex. This is a congenital malformation wherein the urethral meatus is initially small and through local irritation (diaper trauma) there occurs infection, edema and fibrosis with eventual urethral meatal contracture. These children may strain to void, or voiding becomes slow and painful or there may be noted minute urethral meatal bleeding. The mother reports that the child seems to "hold back his urine" or cries during the act or immediately before. However, it is the responsibility of the physician to note

*Read before the Licking Valley Medical Society, Covington, Kentucky, December 9, 1954.

**Professor of Urology, University of Louisville School of Medicine, Section of Urology, Department of Surgery.

this abnormality in his routine examination and demand for it immediate correcton.

The treatment is surgical, not dilatation. It is a simple bloodless procedure which requires less than five minutes of time and offers a complete and permanent cure. The urethral meatus is gently dilated under anesthesia and one jaw of hemostat is slipped into the urethra so that when the clamp is closed the opposite point rests at the tip of the frenum. The clamp is now locked and permitted to remain so for three minutes. After three minutes the clamp is removed and with a scissors or knife the compressed and devitalized tissue is divided through its central portion (Figure 1). Postoperatively the mother is instructed to separate the cut edges of the meatotomy wound daily to prevent rehealing.

Oliguria

During the summer, particularly during periods of extreme heat, infants may become markedly oliguric and we have all experienced the associated parental panic. This oliguric state is due to excessive loss of insensible water (lungs and skin) with an inadequate fluid intake (Figure 2). The relatively greater metabolism of the infant or child causes correspondingly greater loss of water by vaporization and this, coupled with the inability of the infant to secrete a highly concentrated urine, leads to these alarming oliguric states. Because of these facts, an infant ingests proportionately three to four times more fluid than an adult in order to remain in proper fluid balance. Therefore, relatively small variations in fluid intake in an infant reflect rather amazing urinary output changes.

Here again the solution to the problem is simple. First, it is prudent not to suggest to the family that the trouble is due to inadequate fluid intake since the mother interprets this as parental neglect, which she resents. After ascertaining that the child has no serious organic lesion there is prescribed an innocuous medication; ie., peppermint water. The mother is then painstakingly instructed to place in the refrigerator the amount of fluid necessary (based on the infant's age and size—2.5 ounces per pound during the first few months of life and after the first year 2.0 ounces per pound of body weight) for a 24-hour period. In addition there is designated a container in which to collect all of the liquid which is not taken at each feeding during the twenty-four-hour period. Thus, the actual fluid intake may be accurately determined. As soon as the fluid balance is reestablished the infant voids normally and the parents credit the medication prescribed.

Pyuria

Recurrent pyuria is by all odds the third most common and most troublesome urological condition. It is more common in the female infant. The first episode of pyuria may be treated with medication, and if the response is satisfactory further concern in unnecessary. However, if there is a recurrence of pyuria a thorough investigation is mandatory.

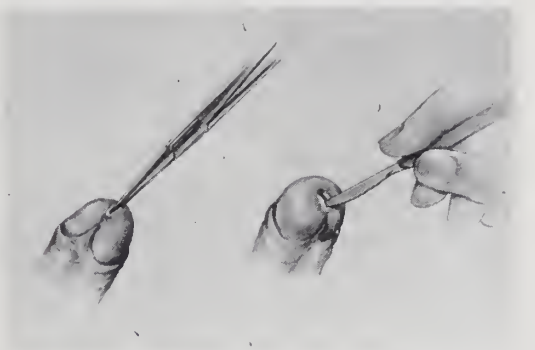

Figure 1. A simple method of meatotomy

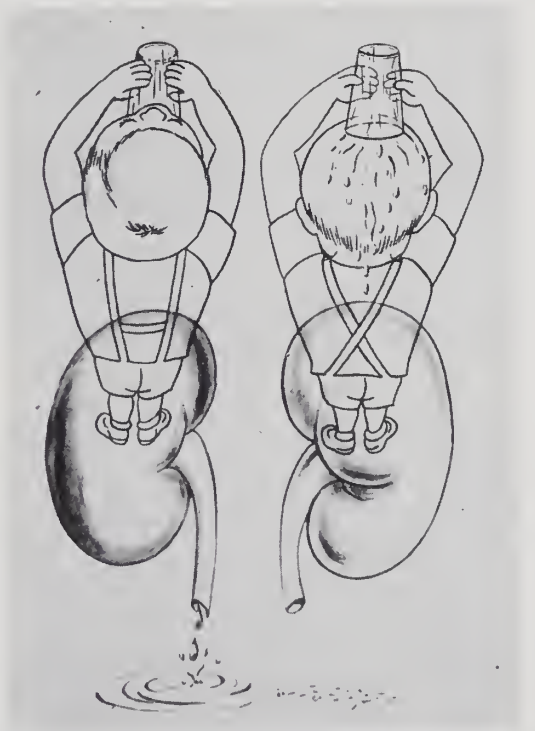

Figure 2. Hydration vs anhydration

Usually pyuria will respond to small doses of any one of the sulfonamides or antibiotics, but it is important that medication be continued for several days beyond the period of symptoms and demonstrable pyuria. Repeated urinalyses are essential to determine both response and cure. Furthermore, in female infants the initial diagnosis must be established by a catheterized urine specimen.

Too often we see children who have been diagnosed and treated as having pyuria and upon catheterization there is no evidence of pyuria. Their "pyuria" was due to vaginal contamination of the voided urine and their state of ill health due to some extraurinary cause.

The specific causes of pyuria are virtually innumerable, but they may be considered under three major headings: 1) bowel stasis, 2) congenital urinary abnormalities with obstruction and 3) foci of infection with or without calculus disease.

Chronic constipation, irrespective of the cause, may be a source of recurrent pyuria. The normally present E. coli of the bowel gains access to the bowel lymphatics and is carried to the kidneys via the blood stream.

Congenital obstructions of the urinary tract continue the infection after it is initially established because of the retained urine which acts as an excellent culture medium for the bacteria. The most common of these obstructive uropathies are ureteropelvic or vesical neck obstructions and various forms of urinary tract atonia.

To attempt a detailed description of all these conditions is impossible at this time, but the significant fact here is that in any instance of recurrent pyuria a complete and detailed urological investigation is essential for the successful treatment and the prevention of future irreparable damage to the urinary tract.

Anatomical Defects

The most common genital tract abnormality is crytorchism or incomplete descent of the testicle, which may be unilateral or bilateral. It is seldom necessary to do anything about this condition in infancy, but it is essential that the testicle be placed in the scrotum before the age of six years. After the age of six years the spermatogenic function of the testicle will not develop and sterility in that testicle remains permanent. It is to be remembered that in all instances there is an associated indirect inguinal hernia which must be adequately repaired at the time the orchiopexy is performed.

Abnormalities of the urethra such as hypospadius are seen on occasion. These may occur at any point along the course of the urethra and are so named; ie., perineal hypospadius if the urethral meatus is in the perineum, scrotal hypospadius if the urethral meatus is in the scortal region, etc. (Figure 3). Treatment of this condition must be considered under two headings: 1) surgical correction of the associated chordee or curvature of the penis and 2) the surgical manufacture of a urethra from the point of the abnormal opening to that of the normal meatal location in the glans. The time at which these operations are best done is based upon genital development and certainly never before the age of five or six years.

A rare but tragic condition is that of exstrophy of the bladder in which the anterior wall of the bladder does not develop. In this situation the base or trigone of the bladder with its ureteral orifices lies flush with the abdominal wall, and urine constantly seeps across the lower abdomen. Associated with this abnormality there are genital abnormalities and widely separated pubic rami which also requires surgical correction.

Many operations have been advocated for the repair of the bladder, but in our experience we have found nothing quite so satisfactory as transplanting the ureters into the large bowel (sigmoid) after the child has developed rectal continence. Under these circumstances the child retains the urine in the bowel, voids urine from the bowel three to five times per day and has the usual formed stool each day. There is created a true cloaca, which functions satisfactorily, and though the possibility of ascending urinary tract infections is always imminent, these chil-

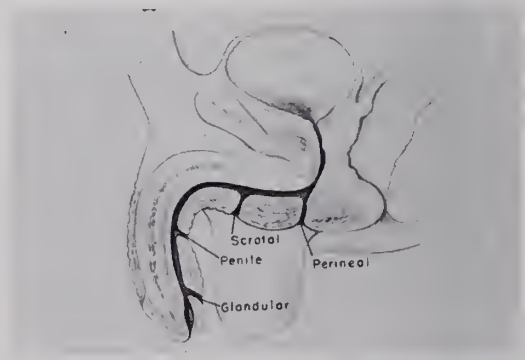

Figure 3. Hypospadius, showing a variety of abnormally located urethral openings

dren get on well in life and may live normal productive lives.

This is but a mere fragment of infant urology and is presented as a reminder of some of these problems and their solution. Let us not forget that to consider the possibility is the first step in diagnosis and that diagnosis is the first step toward successful treatment.

Some Pitfalls in the Diagnosis of Acute Surgical Conditions of the Abdomen*

WILLIAM T. FITTS, Jr., M.D., F.A.C.S.

Philadelphia, Pennsylvania

It is quite possible that before many years have passed, the diagnosis of acute surgical conditions of the abdomen will be a laboratory affair in which physical and chemical testing will take the guesswork out of the diagnostician's job. When that time comes we may find, for example, that tracer substances will differentiate acute appendicitis from mesenteric lymphadenitis in a matter of seconds. At present, however, laboratory methods are a great deal more effective in diagnosing lesions producing chronic abdominal complaints than those producing acute abdominal complaints. In acute cases the physician must still depend primarily on the observations of his senses and must often decide quickly and without reference to the laboratory whether operation should be performed at once or whether delay is justified on the basis of the signs and symptoms. This actually provides a great stimulus and challenge to the physician who makes the diagnosis.

Hazards in Laboratory Examinations

Too great dependence on laboratory examinations may be harmful to the patient with an acute surgical condition of the abdomen. If a physician always waits for elevation of the white blood count before making a diagnosis of acute appendicitis, he may wait until the appendix has perforated. Yet many do wait, and they reassure their patients on the basis of a normal white count. Last year, I examined a man with symptoms and signs suggestive of early perforation of the appendix. I urged immediate operation. He would not agree to operation until several hours had elapsed because, as he put it, "the test for appendicitis was negative." He considered the leukocyte count a specific test for appendicitis, and thought that a normal count eliminated it. In my experience, many laymen cling to this misconception. When our patient finally permitted us to operate, we found that extensive peritonitis was already present.

Precious time can be wasted on laboratory determinations when it is clear from clinical examination that the patient should be operated on at once. The following case was presented recently, as part of an examination, to a surgeon who had completed an excellent training program in surgery.

A sixty year old man in good general health was seized with severe pain in the left lower quadrant of the abdomen. The pain rapidly spread throughout the abdomen and he was brought to the hospital two hours after the onset of pain. An examination showed that the abdomen was distended, no peristalsis could be heard, and tenderness and rigidity were severe in all quadrants.

When asked how he would handle this patient the young surgeon outlined a course of study that required several hours and included scout films of the abdomen and extensive blood chemical studies. Fortunately the "real" patient was operated on immediately and a large perforation of the sigmoid colon discovered and exteriorized.

Certain laboratory examinations may actually harm the patient with acute abdominal condition. Radiologic studies of the gastrointestinal tract with barium in the presence of intestinal obstruction may convert a partial obstruction into a complete obstruction or may perforate the bowel, as for example when, in doing a barium enema, the barium is forced past an obstructing carcinoma of the left colon.

Scout films of the abdomen are helpful in determining the presence of mechanical intestinal obstruction and in differentiating small bowel obstruction from large

*Presented before the Kentucky Academy of General Practice, Louisville, April 20, 1955.

bowel obstruction. They are also helpful in showing free air beneath the diaphragm when perforation of a hollow viscus has occurred. One must not, however, rule out a perforation merely because free air is not visible. In the last six cases of perforated ulcer that I have seen at the Hospital of the University of Pennsylvania in which x-rays have been taken pre-operatively, we found free air under the diaphragm in only three.

The serum amylase level (normal, 70 - 200 Somogyi units) is helpful in making a diagnosis of acute pancreatitis yet normal amylase level may be found in severe acute pancreatitis especially after more than 48 hours have elapsed from the onset of the disease; and the amylase level may be elevated in other acute abdominal conditions, such as perforated duodenal ulcer, for example.

In summary, then, the diagnosis of an acute surgical condition of the abdomen must not depend too heavily at the present time on laboratory aids; a physician must rely, in general, on his own senses in arriving at a correct diagnosis and must decide promptly whether an operation is indicated. In most instances, by careful history and physical examination, a correct diagnosis can be made.

The subject of acute surgical conditions of the abdomen is a large one. In this presentation, I will cover a few of the conditions that I think may be timely and that have been of special interest to us at the Hospital of the University of Pennsylvania.

Symptomatic Abdominal Aneurysms and Thromboses

We must all be on the alert to diagnose abdominal aneurysms and thromboses. In 1949, a patient with the following history died in our hospital.

M. R., a 49 year-old white male, suddenly developed pain in his left groin, which was severe and required opiates for relief. Within four hours the pain had radiated to the left flank and became so severe that it did not respond to morphine. He was admitted to the Hospital of the University of Pennsylvania 16 hours after the onset of pain. Although a fullness was noted in the left groin, a pulsating mass could not be felt, and a tentative diagnosis of a left ureteral calculus was made. Tenderness was severe in the left costovertebral angle and in the left lower quadrant. The patient was examined with a cystoscope several hours after admission and a catheter passed up the left ureter was felt to meet an obstruction at 20 cm. He did fairly well for the next 12 hours, then developed more pain and for the first time became hypotensive. Because of the progression of symptoms and signs he was operated on and a large retroperitoneal hematoma was found, caused by rupture of an abdominal aortic aneurysm. At that time no facilities were available for grafting, and no further operation was done. He died 36 hours after admission. It is noteworthy that he lived for 36 hours following rupture of the aneurysm, and during most of that time was in satisfactory general condition for operation.

Contrast this case report with the following history of a patient operated on a few months ago at the Hospital of the University of Pennsylvania by Charles K. Kirby, M.D., at which time there were available freeze dried aortic grafts. William Blakemore, M.D., and Herndon Lehr, M.D., have developed the blood vessel bank at the Hospital of the University of Pennsylvania.

W. W., a 63 year-old white male, suddenly developed severe mid-abdominal pain. Upon examination in another hospital he was found to have a tender pulsating abdominal mass. He was transferred to the Hospital of the University of Pennsylvania and operated upon 16 hours after onset of symptoms. When the abdomen was opened, 300 cc. of blood were found in the retroperitoneal tissues, which were extensively dissected with blood clots from a ruptured aortic aneurysm. The aneurysm was resected and replaced with a bifurcation graft. The patient made an uneventful recovery and was discharged from the hospital two weeks later.

Recent advances in vascular surgery have made feasible the replacement of diseased segments of large vessels. Aneurysms and thromboses of the abdominal aorta may be successfuly resected and grafted, generally by the use of freeze-dried homografts or prostheses of plastics. It is noteworthy that treatment may be successful even after the aneurysms have begun to produce acute abdominal symptoms or have even ruptured. Within the past two years, five patients have been operated upon at the Hospital of the University of Pennsylvania for abdominal aneurysms which have produced symptoms and signs of an "acute surgical abdomen." Three of these aneurysms had already ruptured, and in the other two the signs were evidently produced by a

sudden enlargement without rupture. In each instance the aneurysm was excised and the defect replaced with an aortic bifurcation homograft. Three of the five patients survived, including the one reported above whose aneurysm had already ruptured.*

The striking symptom in these five patients was pain, which in each instance was excruciating and which usually radiated to the back.

The pain was usually severe enough to make the patient cold and clammy and was associated with transient episodes of hypotension. The pain was in the right flank in one instance, the right lower quadrant in one, the middle abdomen in one, the epigastrium in one, and was generalized in one. It is interesting that all of these five patients showed leukocytosis, the three in which the aneurysm had already ruptured having an average white blood count of 17,000. Although an aneurysm can often be felt as a pulsating mass, which makes the diagnosis easier, this is not always present. In our experience, patients with rupture of an aortic abdominal aneurysm do not die suddenly, but may live for 24, 48, or 72 hours after the first signs of perforation. Time is usually available in which to operate and graft the defect and thus prevent an otherwise certain death. It is for this reason that all of us must be on the alert to diagnose these lesions.

Thrombosis or embolism of the terminal aorta may give acute abdominal symptoms and in addition give signs of circulatory insufficiency of the lower extremities. A patient who was recently operated on at our hospital by Brooke Roberts, M.D., illustrates what may be accomplished under these circumstances. This patient had had symptoms characteristic of the Leriche syndrome for three years, and was admitted with an additional occlusion precipitating the acute abdominal picture.

W. G., a 52 year-old white man, had complained of symptoms of intermittent claudication for three years. Six hours before admission to the Hospital of the University of Pennsylvania he developed severe mid-abdominal pain followed by vomiting. Two hours later he developed severe pain in the left hip and left thigh. Physical examination on admission showed a blood pressure of 200/110. His left leg was found to be cold from the groin down and the left foot was anaesthetic. There was no pulse palpable anywhere in this leg. The leucocyte count was 17,300.

A diagnosis of saddle embolus or thrombosis was made and operation performed two hours after admission. There was no pulsation in the terminal aorta up to a point just below the inferior mesenteric branch. The right common iliac was occluded by an old thrombotic process. The aorta and common iliacs were excised and a freeze-dried arterial homograft inserted. The patient made a good recovery with good circulation in his legs. This man had had severe occlusive disease of the terminal aorta for some years and then developed a sudden additional occlusion causing the acute abdominal and lower extremity symptoms and signs.

The usual presenting symptom in patients with abdominal aortic aneurysms is abdominal pain. We have previously reported one case in which the presenting sign was scrotal gangrene[1]. Autopsy in this latter case showed a saccular aneurysm of the lower abdominal aorta. A thrombosis in the inferior mesenteric artery had produced gangrene of the large bowel, and embolic occlusions of the hypogastric arteries were evidently responsible for the scrotal gangrene.

Aneurysm of the hepatic artery, although a rare cause of biliary symptoms, must be considered in the differential diagnosis of jaundice. Hepatic aneurysms produce pain, jaundice, and bleeding into the gastrointestinal tract. In acute abdominal symptoms associated with jaundice and gastrointestinal bleeding, hepatic artery aneurysm must always be regarded as a possibility.

Porphyria

Many non-surgical lesions simulate acute surgical conditions of the abdomen and at times may be almost impossible to differentiate from them. In recent months, we have seen cases of porphyria which fall into this category. George Ludwig, M. D., of the Department of Medicine of our hospital, has studied these cases intensively and has helped the surgical department in their diagnosis. The acute intermittent type of porphyria is characterized by acute and often recurrent attacks of abdominal pain. Psychological and neurological manifestations may accompany the painful episodes or may not appear until late in the course of the

*The following surgeons operated on these five patients: Jonathan Rhoads, M.D., Julian Johnson, M.D., Charles K. Kirby, M.D.

disease. The pain is severe and crampy and may be localized or generalized. It may closely simulate acute appendicitis, cholecystitis, pancreatitis, or renal calculus. Some patients with acute porphyria have constipation, slight fever, hypertension, and leukocytosis with an acute attack, but none of these features are of constant occurrence. Single, or frequently multiple, scars of previous operations should arouse suspicion of porphyria. The most characteristic finding is that the abdomen is relatively soft in most instances. Although the patient or his physician may note dark or red urine, this sign cannot be relied upon for diagnosis because the urine may have a normal color when excreted and darken only upon standing. One procedure, easily performed in any clinical laboratory and almost pathognomonic of acute intermittent porphyria, is a positive test for porphobilinogen—the Watson-Schwartz test. It depends upon the formation of a red color immediately upon adding Ehrlich's reagent to the urine. Porphobilinogen is insoluble in chloroform, whereas urobilinogen, which also forms a red color with Ehrlich's reagent, is taken up by chloroform. Alertness on the part of the physician and the use of the above simple laboratory procedure may afford a correct diagnosis and avert needless surgery.

Acute Cholecystitis

We find it difficult to correlate the symptoms and signs of acute cholecystitis with the severity of the pathological process found at operation. Not infrequently a patient with mild symptoms will be found to have a severely diseased gallbladder. In general we believe it is safest to operate on a patient with acute cholecystitis as soon as his general condition permits it.

Perforation of the gallbladder is a rare complication of gallbladder disease. The experience at the Hospital of the University of Pennsylvania, reported by Fletcher and Ravdin[2], is 44 instances of perforation in 2,807 gallbladder operations, an incidence of 1.6%.

Hemorrhage as the outstanding manifestation of gallbladder perforation is a most unusual occurrence in this rare complication of gallbladder disease. We have seen two patients admitted to the Surgical Service of the Hospital of the University of Pennsylvania with perforation of the gallbladder in which hemorrhage was the outstanding feature[3]. One of these (T. C.) had a free massive intraperitoneal hemorrhage following perforation; the other (R. S.) did not have massive bleeding into the free peritoneal cavity, but the perforation had resulted in a large subhepatic hematoma which was felt before operation. These two cases seem worthy of note, first, because of the rarity of reports of similar cases in the literature, and, second, because we believe that physicians should be alert to the possibility of hemorrhage from the gallbladder. If patients with this grave complication are to be saved, operation must be performed early. Surgeons confronted by massive hemoperitoneum when operating on patients with acute abdominal symptoms should consider the gallbladder as a possible source of bleeding.

Schwegman and DeMuth[4] have called attention to acute cholecystitis developing in the early postoperative period following surgical treatment of diseases unrelated to the biliary system. This complication is probably more frequent than is generally recognized. Between Jan. 1st, 1930 and Jan. 1st, 1953, 17 cases were observed in the Hospital of the University of Pennsylvania and reported by Schwegman and DeMuth. The symptoms of gallbladder disease are frequently mistaken for the usual postoperative sequelae or other complications. A high index of suspicion of acute cholecystitis is warranted when right upper quadrant signs develop following operation for other disease.

Acute Pancreatitis

At the present time we are treating acute pancreatitis by nonoperative means when the symptoms and signs clearly point to this lesion and when the serum amylase is elevated. It is imperative to remember that other intra-abdominal lesions may elevate the serum amylase, and laparotomy is necessary unless the clinical signs are consistent with pancreatitis. Hotchkiss and I[5] found a significant incidence of elevations of the serum amylase following operations near the pancreas. Postoperative pancreatitis should be considered in unexplained upper abdominal symptoms following operation.

Sigmoid Diverticulitis

Acute sigmoid diverticulitis has been described as "acute left sided appendicitis in the aged." This phrase serves to emphasize two important points in the differen-

tial diagnosis of diverticulitis: age and location of tenderness. Acute appendicitis finds its greatest incidence in the young adult, while diverticulitis is common only past the age of 45. Yet, it is dangerous to exclude the diagnosis of diverticulitis on youth alone. Last year a 32-year-old internist in our hospital developed symptoms and signs which he himself diagnosed as acute sigmoid diverticulitis. He was examined by several professors who said this couldn't possibly be sigmoid diverticulitis because "he is too young." At operation a ruptured sigmoid diverticulum was found. The clinical picture of an inflamed diverticulum may be similar to that of acute appendicitis with abdominal pain, nausea and vomiting, constipation and a variable degree of fever and leukocytosis. Both diseases give localized tenderness on deep palpation, occurring in the right lower quadrant in appendicitis and the left lower quadrant in diverticulitis. The initial pain is usually hypogastric in diverticulitis and epigastric in appendicitis.

It is widely recognized that perforation of the sigmoid colon leading to abscess formation or spreading peritonitis is a common complication of sigmoid diverticulitis. Much less common but occasionally reported is free perforation into the peritoneal cavity occurring soon after the onset of symptoms[6]. Two recent cases reported by us differ, however, from any we have been able to find reported in the literature[7]. Not only was perforation not preceded by symptoms or signs of diverticulitis, but at operation no inflamed diverticula were noted, although diverticula containing inspissated feces were palpated on either side of the perforation in both instances. We believe it is important to call attention to the possibility of spontaneous perforation in the presence of diverticulosis. In operation on patients with acute abdominal conditions, the surgeon at times discovers peritonitis without obvious cause. We are convinced from experience with these two patients that the possibility of perforation of the sigmoid colon should not be dismissed in these instances because of the lack of inflammatory signs in the sigmoid, and a most painstaking examination of the sigmoid may at times be required to locate the perforation. The presence of diverticulosis should alert the surgeon to this possibility.

Ulcerative Colitis

Perforation of the colon in ulcerative colitis often does not produce the fulminating symptoms and signs usually associated with colon perforations and may go unrecognized for days or weeks. The perforation may be small and may quickly seal off. Perforation may be anticipated when severe distension of the large bowel with gas is noted on a flat plate of the abdomen. Colectomy is almost always indicated once perforation has occurred. Some of the patients we have seen with perforation of the colon from ulcerative colitis have been under treatment with large doses of cortisone. Some physicians believe the cortisone may be partially responsible for the perforation, just as it has been implicated in many ulcerations of the gastrointestinal tract. The evidence that cortisone is a frequent cause of perforation or ulceration is not impressive. One thing, however, does seem clear. If the patient has been on cortisone and requires operation for ulceration, hemorrhage, perforation or other cause, the cortisone should never be stopped, but the dosage should be temporarily increased.

Acute Appendicitis

When the appendix is located in its most common position it produces typical symptoms and signs. In about 40 per cent of instances, however, it is located in an ectopic position and may produce unusual manifestations, and diagnosis may be impossible except at laparotomy.

According to the July - August 1953 Bulletin of the American College of Surgeons... "long years of experience in the inspection of hospitals show that, among capable and honest surgeons, these errors of diagnosis (in acute appendicitis) do not exceed rather well defined limits. For example, absence of pathologic change will not be reported in more than five to six per cent of the appendices removed by better surgeons; yet the College has not leveled the charge of unnecessary surgery until this percentage exceeds 10 or 12." Greer Williams in the February, 1954, Harpers Magazine states it for the layman as follows: "In an operating diagnosis of acute appendicitis, the error is likely to be no more than 10 per cent. This includes cases in which the symptoms and history are typical of acute appendicitis but no disease can be found, plus those cases which were thought to be appendicitis but were actually something else."

Nothing is more reprehensible than unnecessary surgery. The American College of Surgeons has done a praiseworthy job of fighting it and should have the full support of all of us in this aim.

However, I think the selection of the appendix as a yardstick of unnecessary surgery is unfortunate. The gallbladder would have made a much better measuring organ for it is well established that gallbladders without stones are better left in. Since our methods for detecting gallstones before operation are reasonably accurate, a "good" surgeon should easily come within the six per cent limit for normal gallbladders. At the Hospital of the University of Pennsylvania we found that only two percent of a series of excised gallbladders were devoid of stones. It has not been our good fortune to achieve any such record with acute appendicitis, a disease which in our experience has been most treacherous and has thrown us well over the six per cent margin of normal appendices.

The individual surgeon must forever balance two variables in the "scale of decision." When a patient has acute disease in the right lower quadrant of the abdomen, the surgeon should operate if the risk of operating is less than the risk of not operating. To read the correct answer on the balance of the scales under these circumstances is often extremely difficult and varies with the circumstances. For example, on shipboard, when no physician is present, the removal of any appendix is, in our opinion, unjustified surgery. In hospitals with poorly equipped operating room facilities and inadequate anesthesia, the risk of operating is higher and should be counterbalanced by a much higher risk of waiting before any operation is undertaken.

The percentage of normal appendices removed by the same surgeon may vary considerably depending on the percentage of children and young women in his practice. We are not often fooled in the diagnosis of acute appendicitis in the adult male, but we often mistake acute mesenteric lymphadenitis in a child or ruptured Graafian follicle in a young woman for acute appendicitis.

There is no question that we could remove a smaller percentage of normal appendices than we do, were we to wait until we are "sure". If we waited long enough, we could probably bring our percentage of removed normal appendices nearly to zero, but we would greatly increase the number of ruptured appendices. A surgeon who reaches this zero percentage is doing a disservice to his patients because he will allow patients to die of peritonitis who could otherwise be saved.

We do not mean to imply that every effort should not be made to establish a diagnosis with certainty. This requires a most careful history and physical examination and close observation of the patient.

Summary

In this brief review of acute surgical conditions of the abdomen we have not tried to be inclusive, but have emphasized some of the pitfalls we have recently encountered. Careful examination of the patient rather than dependence on laboratory examinations has been stressed. Now that aneurysms of the abdominal aorta may be successfully resected and grafted, even after rupture, their early diagnosis assumes new significance.

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Development of Ophthalmology in The University of Louisville*

Historical Background and Bibliography**

ARTHUR H. KEENEY, M.D., D.Sc.

and

VIRGINIA T. KEENEY, M.D.

Louisville

"One of the most interesting departments of the healing art has not been neglected by our practitioners."

Samuel D. Gross, M. D., 1852, Section on Ophthalmic Surgery, 2nd meeting of Kentucky State Medical Society.

When the University of Louisville School of Medicine was organized in the midst of the monetary panic of 1837, the city had only 36 graduate physicians to tend its population of 20,000. This ratio of one physician to 550 inhabitants was overshadowed in those boisterous and cholerous river days by the ratio of one saloon to every 70 inhabitants. Medical specialization in America was then trailing behind the European pattern where Maria Theresa's establishment of the "Vienna School of Ophthalmology" in 1773 became a pivotal date in the history of this field. For proper perspective, recall that the period of the 1770's corresponds with the pioneering expeditions of Daniel Boon(e), 1734-1820, and his opening of the Wilderness Road along which the first settlers came into Kentucky. Louisville, itself, was not settled as a frontier outpost until the landing of George Rogers Clark in 1778, and the only medicine and surgery available here until 1787 was by Physicians of the Army attached to the "fortifications of the West."

Seeds of ophthalmic development in the area were evident, however, in the early 1800's. Daniel Drake, M. D. (Pennsylvania), 1785-1852, founded in 1827 the Cincinnati Eye Infirmary which operated successfully under his direction in that city for 10 years until its merger with the Cincinnati Hospital[1]. Nathan Ryno Smith, A. B., M. D. (Yale), LL.D. (Princeton), 1797-1877, son of the successful New England physician-educator who included cataract surgery in his many skills, gave particular attention to lacrimal strictures, evolving about 1846 his own stricturotome[2] and using gold cannulas of the Wathen type. From 1838 to 1840 he served as Professor of Medicine at Transylvania University (Lexington, Ky.) and was widely known as an operator on the eye. He invented many useful ophthalmic instruments[3].

Similarly the dueling Benjamin Winslow Dudley, M.D. (Pennsylvania), F. R. C. S., 1785-1870, devoted much attention to ophthalmic matters, claiming particular success in cataract surgery, and in 1841 successfully ligated the common carotid artery (without anaesthesia) for exophthalmos and visual loss associated with an intracranial aneurysm. Dr. Dudley, also a professor at Transylvania, published most of his writings in the Transylvania Journal of Medicine (founded February 1828), including his "Observations on Injuries of the Head"[4] and Aneurysms"[5].

Theodore Stout Bell, M. D., 1807-1884, who graduated in medicine only five years before the founding of the University of Louisville School of Medicine, was early showing active leadership in Louisville civic affairs and was laying groundwork for the now famous Kentucky School for the Blind to be opened in 1842. He was vitally interested in this phase of ophthalmic care and served without pay for 42 years on the Board of Visitors—from its origin until his death. In many years he also served gratuitously as ophthalmologist and general physician to the students. As President (1865-84) of the Board he ushered the school into its position of national eminence. With Lunsford P. Yandell, he established in 1838 the *Louisville Journal of Medicine and Surgery*. Dr. Bell rose to a full professorship in the University of Louisville, but in the broader fields of sanitation and public health rather than ophthalmology per se.

James Mills Bush, A. B., M. D., 1808-1875, myopic associate and successor to Dr. Dudley, published in 1837 an anatomical account of an idiot's brain and eyes in which the globes appeared to be intact but without neural connection between the optic nerves and the thalmi nevorum opticum[6].

*From the University of Louisville, School of Medicine, Section on Ophthalmology. Presented at the Louisville Eye and Ear Society February 10, 1955.

**Editors Note: In the interest of saving space, the author's extensive 26-page bibliography is not being published but is on file in the Headquarters Office of the Journal of K.S.M.A.

In the first volume of the *Western Journal of Medicine and Surgery* (Louisville 1840), the Louisville practitioner, William Adair McDowell, M.D., (Pennsylvania), 1795-1853, nephew and one time associate of the famous pioneer surgeon, Ephraim McDowell, contributed 35 pages entitled "Surgical and Pathological Observations of the Eye."

Samuel D. Gross

The American practice of the times was for ophthalmology to be handled by general surgeons and it was therefore logical for one of the foremost pioneer surgeons of the University to be also one of its foremost pioneer ophthalmologists. Samuel David Gross, M.D. (Jefferson), LL.D. (Pennsylvania, Cambridge, and Edinburg), D.C.L. (Oxford) 1805-1884 was professor of Surgery in the University from October 1840 to September 1856 (except for one years absence as Professor of Surgery to the University of the City of New York, 1850-51). His graduation thesis at Jefferson medical College in 1828* was entitled "The Nature and Treatment of Cataract," and his early medical studies under the cool, if somewhat erratic, genius, George McClellan, 1796-1847, of Philadelphia were well leavened with the substance of ophthalmology. McClellan founded in 1821 the Dispensary for Diseases of the Eye, which was the third eye institution established in the United States. Its early demise (1824) was hastened by McClellan's founding of Jefferson Medical College in 1825.

In the year before coming to Louisville, it was portentous that the first English language text on Pathologic anatomy[7] was written by Gross while then a young teacher in the small western town of Cincinnati. This substantial work, dedicated to Daniel Drake of the University of Louisville, contained a full chapter on the eye, and ultimately went through three editions.

While a demonstrator of anatomy in the Medical College of Ohio, Gross and a student by the name of Baker, dissected human, horse and ox eyes (1831) from which he drew remarkably accurate descriptions of the little appreciated ocular fascia. European anatomy at this time was generally confused on details of the ocular fascia and insertions of the extra-ocular muscles, but apparently Gross was not aware of the critically detailed dissections of the Parisian surgeon Jacques Rene Tenon[8]; 1724-1816, memorialized in the term "Tenon's Capsule." On the basis of his own excellent dissections, Gross operated on his first strabismus problem in a medical student—actually "An Alabama Student"—in February 1841. He had operated on about 35 strabismus cases before his lecture[9] on the subject was published in 1842. Also, in his 1842 American edition of Robert Liston's "Elements of Surgery" he added 75 pages including an article on strabismus.

Gross' work was essentially simultaneous with the generally acknowledged first* human tentomies for strabismus as performed in 1839 by J. F. Dieffenbach, 1792-1847, of Berlin. Gross, with characteristic honesty, paid tribute to the antecedent work of Gibson, Dieffenbach, Stromeyer of Hanover, Guerin of Paris and others in the field. He properly advised division of the intermuscular membrane in order to recede a muscle, but unfortunately his comprehension of etiology in no wise paralled his command of anatomy.

Gross also performed exenterations of the orbit, plastic lid procedures, and cataract surgery—usually by couching in adults and the "absorbent method" in children. With his ample supply of general pathology, Gross carried a keen ophthalmic interest to the autopsy table, and to the shame of most present day pathologists would report extraocular muscle findings and eye details quite incidental to the cause of death. Shortly before leaving Louisville he was appointed one of the four American delegates to the First International Ophthalmological Congress. This was held in Brussels, September 13-16, 1857, just when every Belgian doctor was grappling with the worst trachoma epidemic that country had ever known. No official American delegates actually attended but Gross, along with Squire Littell and Isaac Hays, both of the Wills Eye Hospital, Philadelphia, sent communications which were published in the Proceedings. By far the most extensive contribution was that of Gross[10] who systematically discussed each of the seven major themes of the Congress. At this time he pointed out the insufficient attention paid to ocular problems in America and the need for more special hospitals devoted to ophthalmology.

*This thesis followed by only 28 years the earliest known American essay on cataract: Seip, Frederick, An Inaugural Dissertation on Cataract, submitted to the University of Pennsylvania, 27 pp., 1800.

*Exception is made for the sparsely described 1818 surgery for convergent strabismus by William Gibson, 1788-1868, of Baltimore.

In his autobiography, Gross discusses his departure from Louisville (p. 103): "The University was in a declining condition; it had lost some of its very best and most distinguished men; some of the men that remained were weak and vacillating in their conduct and the men that were elected to vacant chairs were distasteful to me. The sad events that followed during the (Civil) war . . . dividing the medical profession . . . proved that I had made a wise decision."[11]

In 1841 the philanthropic globe-trotter, Samuel Gridley Howe, M. D., 1801-1876, founding Superintendent of the Massachusetts School for the Blind since 1830, visited Kentucky to encourage the state legislature in establishing a school for the blind. Daniel Drake, M. D., then Professor of Clinical Medicine in the University, gave a series of popular lectures on the subject which so impressed Mr. W. F. Bullock of the Kentucky legislature, that Bullock with the help of Drake framed the organizing Bill which was passed by the General Assembly February 5, 1842. Ten thousand dollars were appropriated for endowment, and the citizens of Louisville donated funds to rent and furnish the first temporary quarters where the school began operation on May 9, 1842. Subsequently, ground was purchased on Broadway between First and Second Streets where a 35-room brick building was erected. Dr. Drake contributed not only of his energy but gave yearly financial assistance to the School during the lean 1840's. On September 29, 1851 the entire facilities were destroyed by fire, but the teaching program was transferred without interruption into buildings of the University of Louisville until October, 1855, when a much enlarged plant was readied at the present site on Frankfort Avenue.

In 1857 Kentucky appropriated funds for the printing of embossed books and the first volume was issued from the Printing House for the Blind in 1865. By 1879 over 12,000 embossed books had been distributed from Louisville.

At the medical school during these years, the stimulation of ophthalmic instruction was reflected in graduation theses of the students. In 1842 a thesis entitled "Strabismus" was accepted from Leander N. Baker, and a thesis of the same title was accepted again from Robert B. English, class of 1848. "Anatomy and Physiology of the Eye" was presented by John Montgomery, class of 1850. In the class of 1851 Charles W. Anderson wrote on "Purulent Ophthalmia" and Adam Guthrie on "Cataract". In 1852 the thesis of John B. Wilson on "Gonorrheal Ophthalmia" was accepted. I have been unable to find complete lists of student theses after this date.

James Morrison Bodine

It was not until 1866 when James Morrison Bodine, M.D., LL.D., 1831-1915, came to the University from the Kentucky School of Medicine, that planned attention was directed to the eye. Dr. Bodine, basically an anatomist, held wider interest in medical education per se and in 1876 was the prime mover in organizing the Association of American Medical Colleges. In 1881 he succeeded S. D. Gross as president of this organization and was subsequently twice elected president of the Southern Medical College Association. Apparently by self instruction, he became interested in ophthalmology and acquired both a distinguished reputation and promising practice in eye surgery.

In 1871 at the request of the Trustees, he initiated a series of ophthalmic lectures to the students of the Kentucky School for the Blind.

In the 36th session of the University (1872-73) Dr. Bodine gave the first systematized group of lectures on ophthalmology and may, therefore, be considered the first Professor in the field. These lectures, simply entitled "Ophthalmology," were given as part of the free, preliminary "Spring and Summer Course" and followed by 22 years the first organized series of eye lectures in an American medical school. In 1850 Henry Willard Williams, M.D., 1821-1895, of Harvard Medical School organized the first class of students in ophthalmology. No professorial chair was created in America until 1860 when Elkanah Williams, 1822-1888, a University of Louisville medical graduate of 1850, was appointed to the newly created chair of Ophthalmology at the Miami Medical College in Ohio. Dr. Bodine's advent in ophthalmic teaching coincided with the appointment of Dr. W. F. Norris to the fourth American chair in ophthalmology, created that year in the University of Pennsylvania.

Through the 1870's* Dr. Bodine served at the request of T. S. Bell, M.D., as ophthalmologist to the Blind School. He did plastic lid procedures, enucleations, and other ocular surgery for the students.

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*Succeeding the elder Dr. William Cheatham and followed in turn by his son, the younger Dr. William Cheatham.

Of important collateral interest was the Louisville birth in 1874 of Frederick Herman Verhoeff who became Harvard's most distinguished Professor of Ophthalmology and is now the doyen of ophthalmic pathologists.

In 1875 Dr. Bodine's title was enlarged to "Professor of Anatomy and the Operative Surgery of the Eye." The Medical School catalog during the next five years officially designated "Diseases of the Eye and Ear" among the "chairs" to which the University Dispensary furnished "daily college clinic material." Dr. Bodine's lectures were continued annually until 1888 when he relinquished practical and clinical ophthalmology to obtain more time for broader aspects of reform in American medical education. This was both an immediate financial sacrifice and later a near financial disaster when the frost of an unseasonable Florida winter swept away his life savings.[12]

In 1879 "Special and Optional Manipulative Courses" at a surcharge of $5.00 per course were added to the curriculum. At this time William Cheatham, A. B., M.D., 1851-1919, joined the faculty as "Special Demonstrator of Ophthalmoscopy, Laryngoscopy, and Otoscopy." In 1882 the facilities for this course included a special dark room with Argand burners (gas lights had been introduced into every part of the building with much pride in 1841). In 1883 post-graduate courses of six weeks duration were added, and again Dr. Bodine presented the material on "Diseases of the Eye and Throat." In 1885 James Morrison Ray joined the faculty as Instructor in Eye, Ear, Nose and Throat and with Dr. Cheatham in 1886 took over the Spring course which met three days a week.

In 1888 ophthalmology was dropped from the free Preliminary Spring Course, coincident with increasing instruction in the main session. From 1889 until 1896 no professorial appointments were held in ophthalmology but vigorous work was done by the younger men of the faculty.

In 1889 class meetings were increased from three to five days a week as Ray and Cheatham began to revitalize the program which was entirely relinquished by Dr. Bodine the previous year. By 1891 there were EENT clinics held every morning of the week and in 1892 the faculty made its first official designation of an ophthalmic text for students. This was the substantial English translation of Edouard Meyer's "Diseases of the Eye" which had already gone through three of its native French, four German, and one each of Italian, Spanish, Polish, Russian and Japanese editions.[13]. This was certainly a secure and non-controversial choice.

Increasing Americanism was reflected in text book choices in 1894 when the students were given a choice of successful new texts by Henry D. Noyes of New York or Norris and Oliver of Philadelphia. Two clinical assistants, William O. Bailey and Crittenden Joyes (M.D., Univ. Louisville, 1892; former resident, Manhatten Eye and Ear Hospital) were added to the faculty in ophthalmology. In 1895 for the first time, it became mandatory for students to take at least one course in ophthalmology, although the manipulative course in ophthalmoscopy was still optional. In the same year Jefferson Medical College, for the first time, made an examination in ophthalmology obligatory[14].

James Morrison Ray

In 1895 a new era in ophthalmology at the University of Louisville was initiated by the promotion of James Morrison Ray to Clinical Professor of Diseases of the Eye, Ear, Nose and Throat. This was an auspicious time in medicine. Roentgen discovered the X-ray in this year, and the first crude X-ray apparatus was installed in the University the following year. The original group of students at Johns Hopkins were now the first senior class of that school. Osler's fabulous text book had sold more than 25,000 copies. Both technical medicine and medical education were entering a time of lush harvest.

James Morrison Ray, M.D., F.A.C.S., 1866-1918, nephew, namesake and preceptee of James Morrison Bodine, showed outstanding ability while a student at the University of Louisville. As a medical undergraduate he won the second prize for general excellence in 1879-80, and first prize for the same in 1880-81. At graduation in 1882 he was first on the roll of honor and received the Yandell Gold Medal for highest standing in his class. He studied as a house officer at the Manhatten Eye and Ear Hospital, particularly assisting the famous Cornelius Rea Agnew, M.D., for two years, and then returned to Louisville in 1885. He subsequently studied in Paris, London and Vienna prior to his Professorial appointment.

Dr. Ray developed one of the largest private ophthalmic libraries of contemporary scope in this country. He subscribed to practically every English language publication related to ophthalmology. Dr. Ray was a Fellow of the American Ophthalmological Society, a delegate to the Inter-

national Medical Congress in London (1913), and also served as a consultant to the growing Kentucky School for the Blind. He earned the Presidency of the American Academy of Ophthalmology and Otolaryngology in 1914.

Dr. Bodine's interest pattern in educational activities wider than ophthalmology per se, has been followed, though in lesser degree, by each succeeding professor and head of the section. Dr. Ray served for many years on the Executive Committee of the medical school and in 1913 was made Chairman of the Committee.

According to the medical historians Castiglioni and Mettler, Dr. Ray, in 1896, made the first American report of blindness due to methyl alcohol poisoning. This was the same year in which DeSchweinitz's extensive book "Toxic Amblyopia"[15] was published with essentially no reference to methyl alcohol. DeSchweinitz in his 1929 address on "Contributions of American Ophthalmologists" [16] at the dedication of the Wilmer Institute, called attention to this "first," stating that he had seen Dr. Ray's manuscript as presented at a local medical society but unfortunately the report was never published. (The first published case was by Viger of France, Ann. de med 2:105, 1877).

Dr. Ray published 38 known contributions to ophthalmic literature and 23 articles in the ENT field (see bibliography). He also served as Co-editor of the *Louisville Medical News* during the early years of his practice. With J. A. Stucky, M.D., of Lexington, Kentucky, he was instrumental in bringing the annual meeting of the American Academy of Ophthalmology and Otolaryngology to Louisville in 1907.

Merger of Schools in 1908

Junior ranks in the faculty continued to enlarge and to fluctuate somewhat, but no major organizational changes occurred until the historic merger in 1908 of the four other local medical schools with the University of Louisville. Able clinical ophthalmologists headed the EENT sections in each of these schools and all transferred to the University with professorial rank. Thomas Crain Evans, from the Medical Department of Kentucky University, immediately became active in the University as full professor and also Dean of the Faculty. In that first session (1907-08) of the merger, Adolph O. Pfingst also entered the faculty with full professorial rank from private practice, and Isaac Lederman, A.B., M.D., was promoted to the fourth full professorship. In the next session (1908-09) four more professors were added, bringing the total in EENT to eight: Gaylord C. Hall was appointed direct from practice, William Cheatham from the Louisville Medical College (formerly a demonstrator, 1879-85, and clinical lecturer, 1885-92, in the University), Samuel Gordon Dabney from the Hospital College of Medicine, and Martin F. Coomes, preceptee of Dr. D. S. Reynolds, from the Kentucky School of Medicine.

In this amalgamation of talent it was disappointing that Dudley Sharp Reynolds, A.M., M.D., 1842-1915, could not join the University. Dr. Reynolds was an organizing founder of the Hospital College of Medicine in 1874 and its Professor of ophthalmology and otolaryngology until he retired from teaching in 1901. An 1868 graduate of the University of Louisville, he was well trained in major centers of this country and Europe, and was the first physician in Kentucky to limit his practice exclusively to the eye and ear. He was one of the committee of the A.M.A. which established the Section on Ophthalmology in 1877, and served as President of the section in 1880-81. Dr. Reynolds contributed 52 known articles to the ophthalmic literature and twelve to the ENT literature. In addition to his personal writings, he enhanced the early prestige of Louisville medical journalism as founder and editor of the *Medical Herald* (1879-85), editor of *Progress* (1886-89), and co-editor of *Medical Progress* (1890). In 1876 Dr. Reynolds was appointed Chairman of the Special Committee on Ophthalmology of the Kentucky State Medical Society and presented his report at the 22nd annual meeting of the Society, April 5, 1877.

From 1907 through 1923 special attention was given to teaching refraction to senior students and the course was formalized at one hour a week for ten weeks. Private courses in refraction could also be arranged between students and faculty in many of these years.

Dr. Cheatham's return to the University as Professor lasted only from 1908 to 1910 when he became "Emeritus" until his death nine years later. Dr. Cheatham early acquired interest in ophthalmology from his father and preceptor, William H. Cheatham, M.D., who did considerable eye work along with general practice. As early as 1867 the elder Cheatham made weekly free visits as oculist to the Blind

School. After graduating from the University of Louisville in 1873, the younger Cheatham spent two years in residency at the Manhatten Eye and Ear Hospital and subsequently served as a private pupil of Cornelius Rea Agnew, M. D. From New York he visited the eye clinics of London, Paris and Vienna. Shortly after his return to Louisville he was made Chairman of the Committee on Phlyctenual Ophthalmia (1877) of the State Medical Society and also became ophthalmologist to the Kentucky School for the Blind (1879). For 40 years he rendered service to the School for the Blind—usually without remuneration—until his death when he was succeeded by Dr. Lederman.

Dr. Cheatham's fifteen years of faculty service to the University were of distinguished clinical calibre. Dr. Cheatham was a fellow of the American College of Surgeons, and the first Kentucky fellow of the American Ophthalmological Society, founded in 1864 for the purposes of elevating the standards of ophthalmic science. His bibliography includes 60 articles over a wide variety of ophthalmic subjects and 49 articles in the ENT field. His study of "Pulsating Exophthalmos"[17] is included in the extensive monograph on the subject by DeSchweinitz and Holloway.[18]

Martin F. Coomes, M.D., 1847-1919, as friend and preceptee of Dr. Reynold's, brought a touch of his own and Reynold's stature to the University during the 1908-09 session, but with G. C. Hall, M.D., retired from teaching on the conclusion of that academic year. Dr. Coomes personally conducted and reported animal experimentation as early as 1886, and later became particularly interested in plastic surgery about the eye. He published 29 articles in the ophthalmic literature and for a while (1885 f.) served as co-editor of *Medical Progress.*

The deliberate Thomas Crain Evans, M.D., 1860-1911, lived only through three academic years after the school merger, but was a strong asset to the integration of the merged schools. Dr. Evans published twelve known articles on medical and surgical ophthalmology, and in common with many other Louisvillians of this period obtained his special study in diseases of the eye at the Manhatten Eye and Ear Hospital.

Samuel Gordon Dabney, A.B., M.D., 1860-1935, served as one of the full professors of EENT from the 1908 merger until 1931 when he was promoted to "Emeritus." After 1923 he limited his academic work to ENT. In addition to medical degrees from the Hospital College of Medicine and the University of Virginia, Dr. Dabney studied in the major clinics of Germany and Austria. Following Dr. Ray's pattern he also worked for many years on the Executive Committee and was its Chairman from 1921 to 1925. He contributed 64 articles to the eye literature and about 53 to the ENT field.

Adolph O. Pfingst

Adolph O. Pfingst, B.A., M.D., F.A.C.S., 1869-1944, served the University in Professorial rank from 1906 and became the third chief of the ophthalmic section. In January 1919, two months following the death of Dr. Ray, Dr. Pfingst discontinued all ENT work and became the first full time specialist exclusively in ophthalmology in the State of Kentucky. Student's time in ophthalmology was increased to 54 hours, whereas at the time of Dr. Pfingst's original appointment the course was set at 30 hours lecture and 30 hours clinic in eye and ENT collectively. The eye and ear services continued to be administered as one department but the student's work was clearly divided between the specialties. In 1920 the hours in ophthalmology were increased to 128. Subsequent to 1922 the two sections were handled separately and staff appointments were made to one section only.

Following his graduation in arts and in medicine at the University of Louisville, Dr. Pfingst interned in the Louisville City Hospital and then went to Mt. Sinai Hospital in New York. Leaving there, he spent a year in Marburg under Prof. Marchand in pathology and Prof. Carl Frankel in bacteriology. His serious ophthalmic studies were initiated under Richard Greef of Berlin, Wilhelm Uhthoff of Breslau and Theodor Axenfeld of Freiburg. In 1893 and 1894 he was an assistant to Professor Schweiger where he submitted a thesis to the University of Berlin and earned their Doctor of Medicine degree. On returning to America he assisted Herman Knapp and was house surgeon at the New York Ophthalmological Institute for one year.

Dr. Pfingst rapidly rose to the leading position in ophthalmology in this area by virtue of sound training, academic excellence, and ability to work harmoniously with patients and colleagues. He was the second Kentuckian elected to the American Ophthalmological Society and served

on its Council for many years. With Dr. Ray, he established in 1900 the first special medical society (The Louisville Eye and Ear Society) in Kentucky, and was the prime mover in founding the Eye and Ear Section of the Kentucky State Medical Association in 1921. Dr. Pfingst was also an active participant in the American Academy of Ophthalmology and Otolaryngology, the International Society of Ophthalmology, and the Pan-American Congress of Ophthalmology. He represented the University of Louisville at the Convention of English Speaking Ophthalmological Societies in London, July 1925. He further served American ophthalmic publications by translating and abstracting German literature. Although he accepted appointment as "Emeritus" in 1935, he kept a weather eye on the developments of ophthalmology until his death in 1944, and occasionally lectured to medical students as late as 1943.

His early interest in bacteriology was reflected in the *Manual of Elementary Bacteriology* which he wrote with J. E. Cashin in 1898[19]. He contributed 72 ophthalmic articles to various medical journals and published 22 in the ENT field.

Claude Thomas Wolfe

In 1927 Claude Thomas Wolfe, M. D., 1883-1941, who had served on the ophthalmic faculty since 1911, was elevated to the administrative head of the eye section. He served as the fourth chief of section until his death. A University of Louisville medical graduate in 1907, he trained at the Manhatten Eye and Ear Hospital and the Chicago Eye and Ear Hospital. His bibliography includes ten ophthalmic articles and only three ENT publications. Dr. Wolfe, in 1925, succeeded Dr. Lederman as ophthalmologist to the Kentucky School for the Blind. On Dr. Wolfe's death in 1941, the present incumbent, Charles Dwight Townes, M.D., while on leave to the Armed forces, was promoted to be the fifth chief of the section.

As the local custom prior to 1872 had been to practice ophthalmology along with general surgery, a similar custom of practicing ophthalmology along with diseases of the nose and throat prevailed until 1919. It is tempting to think of the huge strides which might have occurred earlier in the history of medicine, had such figures as Gross, Bodine, Ray, Reynolds, Dabney and Cheatham devoted their entire energies to one field.

Ophthalmic Libraries

The medical school library was the first library of the University of Louisville. By the end of the third session there were 1,200 volumes on its shelves. On Dr. Bodine's death in 1915, his entire library was given to the medical school and thus the first Professor in ophthalmology established an informal custom which has been followed rather closely ever since. Dr. Ray's extensive ophthalmic library as well as the library of Dr. Cheatham were both given to the medical school in 1919. The custom was somewhat amplified in the case of Dr. Wolfe, as both his library and major diagnostic instruments were given to the University.

These men who early assumed, and their followers who later were entrusted with the development of ophthalmology in the University of Louisville achieved distinguished clinical calibre in their work. They have been uniformly strong men in the community and at times leading national figures in the specialty. From the first lecturer through the present professor, each chief of the section has recognized larger responsibilities to the University as a whole and has served on the Medical Council, the Executive Committee or other general committees, frequently for tenures of many years.

They have almost consistently bequeathed their medical libraries to the University and at times have even bequeathed their instruments to the teaching hospital. Largely because of the personal interest of these physicians the medical school library now has a very substantial collection of English language texts and journals in ophthalmology.

By their own pens, the men we have discussed added 340 articles to the ophthalmic literature. To this may be added numerous contributions from less conspicuous members of the staff and from the 15 living faculty members, thus bringing the total bibliography of the section to well over 400 entries.

With this secure heritage in clinical ophthalmology it was most appropriate that the University on June 5, 1955 called home a long absent Louisville son to acknowledge further the international acclaim he has earned as a leading ophthalmic pathologist and academic father of practically every Harvard ophthalmologist in the past half century. Frederick Herman Verhoeff, M.D., LL.D. (Johns Hopkins), Professor Emeritus of Ophthalmology at

Harvard Medical School, was awarded an honorary Doctor of Science degree from the University at its commencement exercises this year. In an address to the ophthalmic faculty on June 4th, Dr. Verhoeff echoed the 1857 sentiments of Samuel D. Gross, M.D., in his communication to the first International Congress of Ophthalmology. Again he strongly recommended that a special ophthalmic hospital or institute should be developed as a unit of the University. The Trustees in their unanimous selection of Dr. Verhoeff for this honor, and Dr. Verhoeff in his willing return to accept the degree have mutually saluted the gradual and hearty development of ophthalmology in the University of Louisville and voiced their faith in its continued progress.

"One of the most interesting departments of the healing art has not been neglected by our practitioners."

Samuel D. Gross, 1852

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Headache*

J. KENNETH HUTCHERSON, M. D.

Louisville

It is realized the title of this paper covers a multitude of sins. Everyone in the practice of medicine and surgery has a large percentage of headache cases. When we are unable to find any pathology to substantiate the symptoms that the patient gives, and many times they give these same symptoms over a long period of time, we are prone to classify them as neurotics. Too often we do not take enough time to listen to the patient describe his or her symptoms. If the symptoms are carefully catalogued and weighed, we are able to evaluate the underlying cause of their trouble. Of course, all pathological findings must be properly evaluated through the proper channels of physical and x-ray findings and the extensive laboratory facilities which are now within the reach of most men.

I presume that it is natural that the men in the field of Ophthalmology and Otolaryngology would get a larger percentage of cases suffering with headache than any other group. A large portion of those suffering with headache present no visible or objective clinical findings; therefore, one must rely more heavily upon the subjective findings which the patient presents. This discussion is limited to vascular headache and ciliary spasm.

Headaches are generally classified as vascular or non-vascular. Some of the non-vascular headaches are those of neuralgia and neuritis, pressure headaches and sinus headaches. Among the vascular headaches are histaminic cephalalgia, atypical histaminic cephalalgia, migraine, tension headaches, ciliary spasm and myalgia.

Vascular Headache

Let us review briefly some of the physiological and pathological phenomena of vascular headache. Following vasoconstriction and vasodilatation there is vascular imbalance. Hilger[1] has described the vascular imbalance as being due to irregularities in the autonomic and endocrine

*Read before the Barren County Medical Society, October 5, 1954.

mechanism which control it. When the vascular balance is disturbed there is also a disturbance of the extra-vascular fluids. He further states, "When an arteriole goes into spasm, whether the stimulus be from central impulses or local axon reflex or antigen-antibody interplay at the smooth muscle sphincter, an interesting sequence of events is initiated. The dependent capillary dilates, possibly due to ischemic damage to the endothelium, and in the presence of uncontested reflex venus tonus, fluid transudate leaks between separated endothelium cells into the tissue space. This, then, is the motor unit of wheal formation, the dynamic origin of edema. The biomicroscope has demonstrated it sufficiently frequently, so doubt as to its correctness no longer exists."

Horton[2] and his associates were probably the first to recognize histaminic cephalalgia as a true clinical entity. Horton[3] describes histaminic cephalalgia as "a very definite vascular disturbance, characterized as a unilateral headache which usually begins in the latter decades of life, they are of short duration, as they generally last less than an hour. It commences and often terminates suddenly, tends to awaken the patient at night one or two hours after he has gone to sleep and is frequently eased by the patient's sitting up or standing erect. It is associated with profuse watering and congestion of the eye, rhinorrhea and stuffiness of the nostrils, increased surface temperature and often swelling of the temporal vessels on the involved side of the head. Pain is an outstanding complaint. It is constant, excruciating, burning and boring. It involves the eye, the temple, the neck and often the face."

You will notice the onset is sudden, usually coming on in the night. There are no triggers in these paroxysms as there are in some forms of neuralgia. This type of headache has often been classified as suicidal headache because it is so terrific that not infrequently the patient bumps his head against the wall in an endeavor to relieve the boring, excruciating pain which is most unbearable. This type of pain is not readily relieved by analgesics. Demerol or morphine may prove helpful but are not an immediate satisfactory adjunct for the relief of pain. Horton[2] and his co-workers were the first to use histamine in the prophylactic treatment of histaminic cephalalgia and other vascular headaches. Up until 1939 local injections and surgery of various types were employed to relieve this type of headache.

Hansel[4] has made a study of a large number of cases which he has treated with histamine. He places these in three groups: (1) migraine and tension headache (2) histaminic cephalalgia (3) miscellaneous. He reports his poorest results in series number one, the migraine and tension headaches. He noted excellent results in 90% of his cases of histaminic cephalalgia and good results in 85% of those classified under miscellaneous.

In the study of vascular headache one finds there is a vasoconstriction and a vasodilator phenomenon going on. Pain does not occur during the vasoconstrictor stage, but during the vasodilatation. That is the reason such instant relief is obtained in these cases when they are given, either intramuscularly or intravenously, dihydroergotamine methanesulfonate (DHE-45). The immediate injection of this drug will abort an acute dilatation, thereby relieving the pain almost at once. It is thought by some that in histaminic cephalalgia the vasoconstrictor stage is absent or rather insignificant, thus the sudden onset of pain is due to the acute vasodilatation. This is not true in migraine and tension headaches. In these cases there is more or less continuous vasoconstriction until vascular fatigue sets in. It is more difficult to arrest the vasodilatation in these cases, therefore, Cafergot, ergotomine tartrate and similar drugs do not relieve migraine as they do histaminic cephalalgia. Symptomatic treatment of histaminic cephalalgia is accomplished by giving combinations of Cafergot and caffeine by mouth. Rectal suppositories made up of ergatomine tartrate, caffeine and pentobarbital, given at bedtime, in conjunction with the use of histamine are found most satisfactory.

Histaminic cephalalgia usually comes on in the fourth, fifth and sixth decade. As against this, migraine usually begins with the young and may terminate by the third or fourth decade. To bring about permanent relief from histaminic cephalalgia vascular balance must be reestablished. Through some unknown mechanism, this is accomplished with histamine. In some cases it is accomplished over a much shorter period than with others.

Ciliary Spasm

The second type of headache that I want to deal with is ciliary spasm. This is by no means a rarity. Dr. Guibor of Chicago states that he finds 40-50% of headaches will fall in the ciliary spasm category. This headache apparently is brought a-

bout by a clonism of the ciliary body. It may be the result of over correction of myopia or under correction of hyperopia. There may be some pathological lesion simulating this phenomenon or it may be due to some metabolic imbalance. Colonic spasm is a very frequent cause. Many patients complaining of spasm of the colon, have been on a rigid diet and are usually nervous, which helps to aggravate the ciliary disturbance. Very little is reported in the literature on this phase of headache as compared to other vascular phenomena and yet it is a very common occurrence. I find in my work many more cases with ciliary spasm than I do histaminic cephalalgia, either typical or atypical. The prodromal symptom is headache. Usually the patient comes into the office to have his eyes examined for glasses to relieve the headache. He may have a small or a large refractive error of astigmatism or compound astigmatism. It is essential that such a patient be given the proper refraction and glasses if needed. Oftentimes, without a careful history this important phase is overlooked. The patient usually complains of headache, sometimes much worse in the back of his head than in the front, but as a rule he complains that the pain is behind the eyeball. The eyeballs are sensitive to light and sore to touch. Sometimes it is rather painful to rotate the eyeballs. There may be no objective symptoms other than tenderness when mild palpation is made on the globe. The patient will awaken in the night with a severe headache which is sometimes relieved with aspirin and hot compresses. Frequently strong analgesics will not give relief. Some of the tenacious cases are unable to sleep and may go for weeks without adequate rest at night. They may retire without headache and awaken two to six hours later with a violent headache. They usually describe it as being a dull pain in the back of the eye ball and in the temple area. The next day their eyes are very sensitive to light. Seldom is there any visual disturbance. Many of these have been classified as glaucoma cases, but upon examination the intraocular pressure is within normal limits and there is no evidence of fixation of the pupil or shallowness of the anterior chamber. In my experience, cases of ciliary spasm have been found most frequently in the fourth, fifth and sixth decades, but some are found in the third and even in the seventh decade.

The treatment for ciliary spasm is quite different from that of histaminic cephalalgia, depending upon the nature of the case. The age and temperament of the patient have much to do as to the amount of medication. I have found dropping a weak solution of homatropine hydrobromide in one or both eyes, usually at bedtime, together with some sedation will, within a short time, bring about total relief to the patient. Sometimes the solution has to be made stronger and even given twice a day. Usually in such cases the sedation is also increased to twice a day. I must confess that I have had many patients who have suffered across the years before I recognized the true etiology of their discomfort. I have seen cases who have had a good deal of surgery, much medication and all the examinations known to man, without relief, because the condition was not recognized.

Case Presentations

Case history No. 1: Rev. J. E. W., age 53, minister; patient presented himself in my office on May 27, 1946 for the first time, complaining of severe pain in the left eye. Patient stated that he had become quite discouraged about his condition and wondered if there was any medical relief for him. The minister with whom he was holding a revival in our city urged him to come in and have his eyes checked. He stated that he had been having pain, especially in the left eye, for the past ten or twelve months. His physician in California suggested that he go to one of the eye clinics in the East, which he did. While there, the patient stated, an operation was performed on the cornea to relieve the pain. A corneal ulcer developed and he was in the hospital four weeks. His pain had become so severe that he had not been able to rest and was fearful that he would have to give up the ministry. The pain in the left eye would awaken him at two, three, four and five o'clock in the morning. He would have to get up and take aspirin to try to get relief. A diagnosis of ciliary spasm was made and the patient was given ½% homatropin at bedtime, and phenobarbital, one grain, three times a day. Two days later he reported that he felt some better and had been able to get some rest.

Four days later he reported that he had the first four nights of unbroken rest in four months. He was continuing to use ½% homatropine at bedtime and to take one grain of phenobarbital three times a day. At this time he was advised to take one grain twice a day, but to continue the homatropine at bedtime. He was seen one

week later entirely free from pain and advised to taper off, using one grain of phenobarbital and the ½% homatropine every other night. This medication was kept up for three weeks at which time he returned to the office and was advised to leave it off entirely. Patient reported back to me one year later to have his glasses changed. He had been entirely free from pain without any medication. He was next seen three years later to have his glasses changed again. He stated that he had had no trouble. If he felt a ciliary spasm coming on he used ¼% homatropine and one grain phenobarbital at night for a few nights. He presented himself again in three years to have his glasses changed and stated that he had been entirely free from headache.

Case history No. 2: Mr. L. P. B.., age 33; first seen September 25, 1943; came in to have his eyes examined; complaining of severe headache which awakened him in the morning and early hours of the night. Patient examined under 3% homatropine, but no glasses were given. He was not seen again until January 1946 at which time he reported that he had been awakened at two o'clock in the morning with severe pain in the right eye for the past five days. Intraocular tension was normal in each eye. Patient was given 1% homatropine in the right eye three times a day and one grain of phenobarbital three times a day. He reported two days later stating his pain was much less and he was able to rest. One week later patient was given glasses. He was still having some pain in the right eye in the early hours of the morning. He was urged to continue ½% homatropine and phenobarbital. He was next seen in January 1949, complaining of being awakened at 2 a.m. with pain in the right eye. My record does not show that he had any of the histaminic cephalalgia symptoms other than the pain in the right eye. His glasses were changed again in February 1949. He continued to have some pain in the right eye, but was kept on a weak solution of homatropine and on phenobarbital. He was next seen in April 1952 with severe pain in the right eye for one week, stating the symptoms were the same as those he had in 1946 at which time the eye drops had relieved them. He had been treated by another doctor who advised him to have a tooth extracted which he had done without relief. He had his glasses changed six months previously thinking that it would help his eyes. It was at this time that we recognized symptoms of the histaminic cephalalgia. Immediately we gave him the provocative test of .35 c. c. histamine without any reaction. We were aware that the homatropine and phenobarbital were not giving relief. One week later the patient returned and stated that he was walking the floor, the pain was so severe. He would get up in the night and bump his head against the wall trying to alleviate the pain. At this time he stated that the right eye watered, and had stuffiness in the right nostril and the attack would last about one or two hours. His sinuses, teeth and throat were entirely negative. At this time he was given 3/4 c. c. of histamine as a provocative test and positive results were obtained. There was sweating over the right eye and stuffiness of the right nostril, with severe pain radiating down into the jaw and the right temple area. Patient was given intravenously one ampule dihydroergotamine methansulfonate. Immediately his symptoms were relieved. He was started on histamine, beginning with 0.1 c. c. subcutaneously twice a day, increasing the dose daily. At night he was given a rectal suppository of 2 mgm. of ergotamine tartrate and 100 mgm. of caffeine. Within 10 days or two weeks, the patient was almost entirely free from pain. He was given injections of histamine, tapering off the dose, for two months, at which time he was dismissed. The patient was in the office this week and stated he had been entirely free from any further symptoms.

Case history No. 3: Mr. W. F. S., age 53; first seen November 1953. He complained of severe pain over his right cheek, watering of his right eye, which was worse at night, and extreme tenderness of his upper gum. He had a history of previous trouble 10 years ago while in the Navy. The present attack had come on two days previously and was the first in 10 years. He was given Empirin No. 3 without relief. When seen one week later, he had been walking the floor with pain and had typical symptoms of histaminic cephalalgia. A provocative test of .35 c. c. histamine was given hypodermically. This precipitated a typical attack of histaminic cephalalgia with violent headache. One c. c. of dihydroergotamine methanesulfonate (DHE-45) was given intravenously. Almost immediate relief was obtained. He was started with 0.1 c. c. histamine twice a day, increasing the amount by 0.1 c.c. daily up to .60 c. c. daily. His headaches were relieved within two weeks. Hista-

(Continued on page 889)

CASE DISCUSSIONS

FROM THE UNIVERSITY OF LOUISVILLE HOSPITALS
DEPARTMENT OF RADIOLOGY

A Case of Tetralogy of Fallot

This three and one-half year old female child was admitted to the Children's Hospital for cardiac surgery.

Patient's history dates back to birth when marked cyanosis was noted. This had been present intermittently until the time of admission. The patient had been admitted to two other hospitals in other communities for "pneumonia" and "heart trouble." She developed fairly normally but had never been able to play with other children. According to her mother the child had simply sat in a chair and rocked, with no effort at further activity. The parents described frequent "fainting spells" at which time the lips and nails became blue, the cyanosis disappearing when the patient recovered consciousness.

On physical examination the patient was a fairly well-developed, though somewhat undernourished and chronically ill appearing white female child. The lips and mucous membranes were moderately cyanotic. The fingers were clubbed and the nail beds were blue. The heart was slightly enlarged to the left with a thrill present over the apex. There was a harsh Grade 1 systolic murmur over the entire precordium which was loudest at the apex. The first and second sounds were heard in all areas. The liver and spleen were not palpable.

The red blood count showed a slight increase ranging from 5.6 to 5.9 million. The hemoglobin ranged between 13.5 and 13.8 grams per cent. Cardiac fluoroscopy showed the heart to be slightly enlarged with definite elevation of the apex and with a concavity in the middle cardiac segment on the left, giving the heart a "boot-shaped" appearance. The lung fields were slightly undervascularized. The aortic arch descended normally on the left. Electrocardiographic examination was interpreted as consistent with right ventricular hypertrophy.

Angiocardiogram: (L. A. Davis, M.D.—Department of Radiology) 20 c.c. of 70% Urokon were injected into the saphenous vein. The opaque material filled the right atrium and right ventricle with simultaneous opacification of the aorta and pulmonary arteries. The densities of both the latter vessels were equal. The aorta descended normally on the left, but no definite roentgen evidence of any stenotic area could be seen. The major pulmonary artery branches were well visualized and considered adequate for surgical anastomosis. (See Fig. 1.)

The preoperative clinical diagnosis was congential heart disease—cyanotic type—probably tetralogy of Fallot.

Under endotracheal anesthesia a standard thoracotomy incision on the left was made. The heart was palpated and a strong thrill was felt in the pulmonary valve area. This was interpreted as indicating that the pulmonary stenosis was of the infundibular type. A Pott's procedure was performed. The aorta was dissected clean

Figure 1

with removal of four or five intercostal arteries and several bronchial arteries. The left pulmonary artery was well isolated and an anastomosis measuring .5 cm. in length was performed between these two vessels.

Since no thrill could be palpated at the site of the anastomosis a small pulmonary artery was isolated and a probe inserted into it and through the anastomotic site, proving that it was patent.

The entire procedure was done under hypothermia, using ice bags and keeping the patient's temperature at approximately 88 degrees. Following the operation the child appeared to be less cyanotic.

Discussion by Joseph Little, M. D.
(Department of Pediatrics)

From the history, physical findings, special studies and the effects of operation, the diagnosis of tetralogy of Fallot seems to be rather obvious. As you know, tetralogy of Fallot is the association of pulmonary stenosis, usually infundibular in type, right ventricular hypertrophy, high interventricular septal defect, and an overriding aorta. The defect allows for the shunting of blood from the venous side of the heart into the peripheral circulation through the interventricular defect and the overriding aorta. This accounts for the cyanosis which these patients develop and is an explanation of their overall physiological difficulty.

In about 1944, Dr. Blalock and Dr. Taussig of Johns Hopkins University Hospital reported their successful surgical amelioration of this syndrome. Shortly after this, the Potts-Smith technique as an alternate was introduced. The differences between these two techniques are technical and since both serve to add a fifth defect to the tetralogy, the effects of a shunt procedure—whether it is an end-to-side anastomosis such as the Blalock procedure, or a side-to-side anastomosis such as the Potts procedure—are the same. In both cases the effect is to increase the blood flow to the pulmonary circulation. This increase in flow of mixed blood through the pulmonary circulation raises the total oxygen content of blood being delivered to the periphery. This has been proven by comparing arterial oxygen saturation pre-and postoperatively. But, more important clinically, these patients become able to live a fairly normal life; they lose almost all of their cyanosis, and the clubbing of the fingers disappears. For completeness sake, I would like merely to mention the Brock procedure which is a direct attack upon the stenosis of the valve.

Now as to the indications of this patient's need for surgery, we shall primarily review only the present illness. The history reveals increasing difficulty with "fainting spells." These were described by the parent and were observed by several members of the staff while the patient was on the ward. The common history of the illness usually is that the patient begins to get into difficulty around six months to one year of age, and if he survives until he is one and a half to two years of age, he does fairly well until the eighth or ninth year is reached. However, this patient had apparently been in good health through the second year of life and only then had begun to develop the so-called "cyanotic spells" which seemed to increase in severity. This is indication enough for the need of surgery. However, on observation, the patient was noted to be definitely cyanotic with clubbing of the fingers and toes. Cardiac findings were as described and there was a polycythemia of 5.6 to 6.0 million RBC with a hematocrit of 54 to 57. The electrocardiogram also revealed rather marked right ventricular hypertrophy. It is my feeling that any child with such a history, with proven cyanosis and right ventricular strain, certainly should be investigated with the idea in mind of possible surgery. The definitive studies of cardiac catheterization and angiocardiogram were done with this in mind and surgery then was performed. Only time will tell as to whether or not this was the correct decision.

Discussion by Hugh Lynn, M. D.
(Department of Surgery)

It is only fair to preface any statement on this case with a repetition of the surgeon's creed with respect to tetralogy of Fallot.

1. Surgeons do not believe that adding a fifth defect to an already deformed heart is as good as removing one of the four defects, and on this basis I, along with many other surgeons at this time, am avoiding cardiac surgery on small children with this lesion who are not experiencing great difficulty, in the hope that within the immediate foreseeable future a more logical, safe way of attacking the infundibular region of the heart under direct vision will become feasible.

2. Surgeons dislike operating on youngsters for tetralogy before they reach the age of four of five years, inasmuch as it

is technically more difficult in an infant and toddler, and the mortality rate is definitely higher. In my own experience the degrees of improvement from surgery have been less predictable in this younger age group.

In this particular case the young lady was obviously handicapped and had been observed in spells of cyanosis in which she appeared to lose contact with her environment. This in itself appeared to be sufficient indication for surgery. On entering the pleural cavity it was possible to place an index finger over the left pulmonary artery and immediately an impression was gained that the pulmonary artery was not particularly large, and there was little or no thrill present over this area. However, on passing the finger retrograde along the pulmonary valve and just proximal to the valve, a very turbulent thrill was palpable. This seemed definitely to indicate that the stenosis was of an infundibular type as is found in an overwhelming majority of these patients. The chest was then opened widely in the lateral position so as to expose the aorta and the posterior aspect of the pulmonary artery. It has become my practice to perform a Pott's aortic-pulmonary anastomosis in any patient who has a left-sided descending aorta, inasmuch as it is technically an easier procedure and one in which the percentage of functioning shunts seems to be higher in the hands of most surgeons. However, the technical difficulties of the Pott's procedure in the right chest or the surgeon's greater familiarity with the procedures in the left chest have lead to less success in the right chest. Therefore, I have reserved the Blalock type of subclavian pulmonary anastomosis for those cases in which the descending aorta is on the right side. Because of the state of modified hypothermia which was maintained throughout this procedure, the heart rate was slow; the pulsation in the aorta and in the infundibular region of the heart was very minimal. Consequently, it is understandable that when the anastomosis was completed there was not the gratifying thrill over the entire parenchyma of the lung which is usually felt. Inasmuch as it did not seem fair to the youngster to complete the operation without proof of our patent anastomosis, the little trick of isolating a small pulmonary branch and threading a probe down into the main artery, and thus through the anastomosis into the aorta, was employed. This left no doubt in anyone's mind that there was an adequate patent anastomosis present, and although no thrill could be palpated and no murmur heard at the closure of the procedure, we were convinced that a patent anastomosis was present, and the patient's subsequent course has justified this assumption.

Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

All scientific material appearing in the Journal is reviewed by the Board of Consultants on Scientific Articles. If illustrations are submitted with a paper, the Journal will assume the cost for the first three one-column width half tones. The cost of additional illustrations will be borne by the essayist.

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SPECIAL ARTICLES

FEES, STATEMENTS AND PATIENTS*

WALTER L. PORTTEUS, M.D.**

The patient may not be able to evaluate a doctor's particular skills and methods in arriving at a diagnosis or treatment, but he certainly can evaluate money, especially by comparison with other commodities and services he purchases. In many instances the patient's pocketbook is a more vital organ than his heart.

We do not buy a house, a car, or a pair of shoes without asking its costs before we complete the purchase. Why should medical care be in a different category?

The reticence to prior discussion stems from our archaic idea that the patient will think we are mercenary. The patient also avoids this discussion for fear we will not understand his interest. He feels he needs our service; otherwise, he would not have sought it. Therefore, we must make him feel comfortable in such a discussion.

The practice of medicine is not only a science and an art, but a business service where good business principles should prevail. The statement that the cost will not be "much" leaves *much* to be desired. Did you ever define "much" in terms of dollars?

We are all cognizant of the role so-called "overcharging" plays in malpractice suits. Understanding beforehand, tends, at least, to eliminate many of these so-called cases of overcharging.

This philosophy of prior discussion of cost should also extend to cover the hospital, drugs, and auxiliary services. Doctors, sometimes, are blamed for the so-called increased medical care costs, when often an individual physician's particular percent of the total bill is actually quite small.

During these prior discussions we should find out the patient's ability to be hospitalized, because unnecessary hospitalization tends only to raise the general overall cost of medical care and leaves a disgruntled patient, if he thinks he has been hospitalized needlessly. This does not apply to patients with insurance coverage because there we have to discourage unnecessary hospitalization.

Some county societies have been experimenting with the median average, or usual fee plan, first originated in Alemada County, California. The idea is for county societies to present to the patient a so-called average fee schedule. To arrive at this schedule questionnaires were sent out to each member of the local society who returned his usual fees for a given list of surgical and medical procedures. These were all returned anonymously and given a code number.

The prices each doctor charged for a procedure were grouped on cards to indicate the various price ranges and a usual fee was thereby established. For instance, 74 physicians responded with a fee for appendectomy. Of these, 18 charged $150; twenty-two $175; one $190; twenty-six $200; and seven $250. So the median fee was $200. Now this fee index can serve as a guide for both the patients and the physician. In no way is the doctor bound by this fee index. It is really not a schedule. The doctor has the freedom to charge more or less than the index. However, he cannot charge more unless he discusses his higher charge with the patient *prior* to accepting the case. As physicians with varying skills we should not be forced to give up this right of charging for what we believe is proper for *our* particular knowledge.

It does seem rather unreasonable to believe that physicians are not willing to sit down and discuss with their patients what a certain surgical procedure or medical care might cost. There does seem to be a reticence, as mentioned before, on the part of both the physician and patient. This seems to be a throw-back to the old days of the practice of medicine in which doctors very seldom sent out statements and were often paid by produce or livestock, etc.

Publicity, plus changing social and economic conditions in this country have made people more conscious of health and the

*Read at the County Society Officers Conference at Lexington, April 7, 1955.

**President of the Indiana State Medical Association.

cost of medical care. As one result, labor unions are demanding and getting medical service and hospital care as fringe benefits. These benefits, many times, are bargained for without the purveyors of these services being present at the bargaining table. I believe it is high time medicine participates in "patient-employer" and labor conversation concerning fees.

Of course, if this is done, medicine must be willing to enter into a firm committment and then live by the agreement. An average fee schedule based on the premise of prior discussion will obviate much misunderstanding in relation to the laboring man's idea of what his fringe benefits will do for him in the medical market. Insurance companies, both voluntary, nonprofit and commercial, can better underwrite medical coverage if a base line is known. Too often patients believe the insurance contracts they have purchased will pay for their illness in its entirety.

Because of the fact that before a surgical procedure the patient and family are often upset and it is difficult for them to remember what has been discussed by the physician regarding fees, procedures, and the team involved, I prepared a small pamphlet entitled "To All My Patients." This pamphlet was prepared for my own particular situation to tell the patient exactly what to expect in the way of necessary professional services in his particular case. Giving this pamphlet to my pre-surgical patients gives me an opportunity to discuss fees, the other items they will be expected to pay for in addition to my services, and the method of payment. Naturally, this may not fit all situations, but it is simply an effort on my part to answer questions which I have found common during my practice, and put it in writing for these patients to take home prior to their surgery. This pamphlet has been quite well received, not only in my own state, but I have had requests from physicians all over the country and have sent literally thousands of copies in response to their requests. I understand that Michigan is about to use the idea state wide, with corrections, of course, to fit their needs.

The question of statements is quite important in the practice of medicine. I believe that statements should be sent out regularly and itemized so there is no question at to how much is being charged for any particular service. The patient has the right to expect this from his physician as well as from any other person with whom he does business. Some physicians have adopted a carbon type of statement and receipt to be given to the patient following each visit. This tells the charges made for the services rendered on that day, the amount paid, and the balance due. Such practice tends to remind the patient of his account and obviates many misunderstandings. He may keep these records for his own income tax purposes.

In many areas, due to the type of economy, such as in farming communities similar to my own area, it has been customary to send out statements once a year or at seasons when farm products are marketed. In my practice, I have discouraged this tendency, by sending statements as promptly as possible following the service. It is a rule in my office to bill my accounts each month. It was often said early in my practice than when my patients got home they had already received a statement for that day's services.

In a number of instances the patient complained that I was dunning him for his bill. I tried to explain carefully that under no circumstances was there anything on the statement which said he had to pay or that the account was now due—although it may have been implied. The statement is simply a business like way of informing the patient of what I charged for my services and how much he owes. It is a well known fact, unpaid accounts diminish in value about 10% each month after the service is rendered.

The failure to send itemized statements, the failure to have prior discussions of fee and services, the failure to discuss insurance coverage in light of anticipated costs is a major reason for many of our public relation difficulties with the patients of today. We fail to realize our patients today are better educated in medical terminology, medical possibilities, treatments and fees charged. Because of our inability or unwillingness to discuss these aspects we have been criticized and I believe, justly, in a good many instances.

While the medical profession as a whole has done an excellent job in supplying medical care to our people, there is a very small per cent of physicians who by chiseling, over-charging, doing unnecessary surgery and such, have cast a cloud of unfavorable public opinion over our profession. It behooves each of us to take cognizance thereof. But "cognizance of" is not enough. We must prove to the public—our patients—that we do not condone such practices. If we are to survive as a free enterprise system in this country, medicine must unite and work together to achieve these beliefs.

EDITORIALS

DIABETES MELLITUS

Diabetes Mellitus ranks tenth in the cause of death in the United States. About one million people are known to have the disease, and it is estimated that one million have it and do not know it.

While it is known to be hereditary there are no laws to prevent its continuation through the intermarriage of diabetics. Yet if a diabetic would be sure to marry one who is neither a diabetic nor of a diabetic ancestry their progeny would not develop diabetes. Susceptible individuals, through heredity, should avoid precipitating factors as obesity, overeating, infections.

The complications of diabetes are of three types: acidosis, infections and cardiovascular renal disease. The first two are preventable and amenable to therapy. The third type accounts for 75% of the deaths among diabetics. The long-term complications which are basically vascular occur less frequently in those patients who maintain normoglycemia and aglycosuria.

Those diabetics who have received their 25-year medals for going 25 years without developing a complication attest to the excellence of always maintaining good controls. To establish good control in a diabetic is to regulate the diet, insulin, nutrition and exercise so as to achieve in the diabetic the same physiological levels as nature does in the normal individual.

The physician must be an evangel to convert a patient from his old way of living to one necessarily circumscribed, but one which makes for better health and increased longevity. He should lead the patient to feel happy to be able to so care for himself that he can do almost everything anyone else can do. Many outstanding athletes and prominent men in various activities are diabetics. Banting and Best's discovery of insulin has put the diabetic on a par with the non-diabetic.

So well has this new world for the diabetic been recognized that employment more and more is taking the diabetic into the fields of industry, and insurance companies are granting insurance to the well-controlled. It should be noted that diabetes is the only disease with a magazine for its patients, the A.D.A. Forecast. In 1914 the average age of diabetics at death was 44.5 years while in 1951 the average age was 64.7 years. All this is due to the advances made in diabetic care and the education of the public about diabetes.

There are about one million people in the United States and about fifteen thousand in Kentucky who have diabetes and do not know it. They are without care and are becoming the victims of complications and death. To find out who these are the American Diabetes Association has sponsored an educational and detection drive every November since 1948 to bring to general attention the magnitude of the diabetes problem, and to emphasize the idea that the diabetic detected early and brought under continuing care has the most hopeful outlook.

In the last four years the Kentucky State Medical Association has sponsored this drive in our state, discovering 684 new diabetics and offering them the chance of adequate care and a hopeful outlook. During the week of November 13-19, 1955, we are going to do our fifth Education and Detection Drive and trust it will do honor to Kentucky physicians and rescue more unknown diabetics from the complications that come from neglected and uncontrolled diabetes.

CARLISLE MORSE, M. D., Chairman,
K.S.M.A. Committee on Diabetes

Opinions expressed in contributions to this Journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

SHOULD DOCTORS DISCUSS HEALTH INSURANCE WITH PATIENTS?

Quite often doctors ask, "What should I tell patients who want to know what the best health insurance policy is, or if the policy they have is any good?"

Undoubtedly, such questions are often difficult to answer. Most doctors recognize, however, that their own interests as well as the patients can be served by helping those that seek their counsel on insurance problems.

How far the physician should go, however, is a matter which requires careful evaluation.

Obviously, the physician should understand basic insurance principles. He should know such things as the difference between group and individual insurance— why one is cheaper than the other and why waiting periods and pre-existing disease clauses are necessary in the latter and not in the former.

It must be recognized, as has been pointed out by Percy E. Hopkins, M.D., chairman of the A.M.A.'s Committee on Prepayment Medical and Hospital Service, that the physician may be leaving himself open to severe criticism if he ". . . undertakes to interpret an insurance contract (Blue Shield or private) . . ." He notes that the doctor " . . . is not the final authority, since a claim clerk or claim officer will ultimately decide whether or not a benefit is payable." If he is proved wrong, Dr. Hopkins points out, "the physician may lose the good will which he has spent years developing. . ." His recommendation is that the doctor ". . . suggest tactfully that the patient seek insurance advice from insurance men just as he seeks medical advice from physicians." Most professional insurance representatives will be glad to help persons seeking such advice.

If the doctor is familiar enough with the particular contract to know that the services in question are covered or not, he may feel confident in saying so. If the care is not covered, the physician can be of service to the voluntary health insurance cause if he points out why it is not, and, possibly, why it should not be covered. Few people understand that health insurance policies cannot pay the bill in full for every type of medical service. "The risk involved must be of financial importance to the insured" is a cardinal insurance principle, and if a contingency of the "grease-job, brake-adjusting" type, which occurs frequently and represents no great loss, is insured, the policyholder usually winds up paying the full cost in premiums plus the insurance company's administration expense.

In general, the physician is on safer ground when he confines his "patient health insurance activities" to the broad field of education. As Dr. Hopkins says, for example, ". . . no physician should urge any specific plan on his patients. His function should be, when the question arises, to urge the patient to carry that insurance which fits the needs and pocketbook of the patient and his family."

For the good of the patient and the doctor both, it is wise for the physician to recognize his own limitations in the field of insurance. Explain, and sell the principles of good insurance, yes; pose as an expert insurance counselor, no. All will be served by the pursuit of an intelligent middle course by the doctor.

WHO LEADS?

Recently two women, on the same day, brought with them to our office an article from a current magazine extolling the almost miraculous effects of a new drug. They wondered if this would not be just the thing for their complaints— and were a little quizzical as to how come they hadn't been told about it before. The drug had not been distributed for general use, nor detailed to the profession in our community. Three years ago, another drug was given a feature article in a national magazine and aroused many anxious inquiries from patients as to why they too had not long ago been given this wonder drug for the cure of their arthritis. At the time the article appeared, we had concluded, after a fairly careful trial, that the drug was practically useless and articles were appearing in medical journals to that effect. The recent unfortunate experience over polio vaccine must surely be due, at least in part, to ill advised and ill timed publicity. This may have been avoided

had not over-enthusiastic persons outside the medical profession prematurely scheduled the program of inoculations. Dr. R. H. Kampmeier, in an editorial published in the July issue of Southern Medical Journal, very aptly says: "Matters such as the vaccine for poliomyelitis must be left in the hands of the investigator and the professional personnel working with him. He only will know when results are ready for publication and, if it seems better to wait yet another year or two or more for double checking, so it should be. . . The laymen must learn that the medical investigator should be free of pressure; only in this way will he make his greatest contribution to the health and welfare of the people."

Patients call by telephone, or upon their first visit to the office, and present the proposition that they need or wish to see a Psychiatrist. It may well be that they are right, but such a decision should be made by the physician after careful consideration of the physical and emotional factors involved. The Psychiatrists are overworked now with persons referred to them for good reason. Should they be called upon to attempt a solution of an unreasonable number of minor psychosomatic complaints, their intended mission of care to the mentally ill would be seriously hampered. The physician should be the judge as to when psychiatric help is needed.

People are becoming more and more health conscious—and more intelligently concerned with matters of mental health. It is unfortunate, however, when editors of magazines and newspapers publish, prematurely, accounts of new drugs and new modalities of treatment. The public too often expresses impatience with the slow and methodical processes by which new forms of therapy are tested and retested before being released for general use. It appears that fanfare, drama, and the spectacular must be imposed upon our professional researchers and accomplishments as upon every other activity in present day living.

This inquisitiveness and over-enthusiasm, sometimes amounting to mischief, will persist on the part of some of our public, despite mild protestations like expressed here. We must endure it with equanimity. We can, however, be more alert to the needs of our patients and strive to bring to their relief as promptly as is safe the newer advances in medicine.

SAM A. OVERSTREET, M. D.

HEADACHE

(Continued from page 881)

mine was kept up three months, gradually reducing the dosage after the first month. Patient was last seen May 15, 1954, entirely free from headache.

Case history No. 4: Mrs. L. L., age 58, first seen October 1946. Patient was complaining of soreness of the eye ball, eye strain, and inability to read any length of time with any comfort. Her eye discomfort was so great she had to limit her reading for the past few years. She had had her glasses changed a number of times, each time getting partial relief for a short period of time. She had normal vision in each eye with glasses, normal intraocular tension, active pupils and an anterior chamber of normal depth. A diagnosis of ciliary spasm was made and the patient was given a mild sedative and a weak solution of homatropine hydrobromide to use once or twice a day in her eyes. She was slow in getting results and was not convinced that this would give her relief. She returned to her home in California after spending one month in the East. A month later she wrote saying that she had left the medicine off and nothing more was heard from her. Six years later she was seen. To my amazement she stated she had been using a weak solution of homatropine hydrobromide twice a day in her eyes for the past six years and had never known such eye comfort.

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ORGANIZATION SECTION

Annual Diabetes Detection Drive Set For November 13-19

Every KSMA member is being asked to participate in the 1955 Diabetes Detection Drive, November 13 to 19, by the KSMA Diabetes Committee through its chairman, Carlisle Morse, M.D., Louisville.

The drive, which is sponsored by the Association annually in cooperation with the American Diabetes Association as part of national Diabetes Week, will be the fifth conducted in Kentucky. Its purpose combines general diabetes education with a specific effort to discover as many as possible of the 15,000 unknown diabetics in the state.

Each physician is asked to give a free urine sugar test to all persons requesting it between November 13 and 19. A free supply of testing materials is available to the physician through his county medical society diabetes committee.

The diabetes program, on the local, state and national level, is distinguished among prominent activities of this nature by the fact that there is no general fund raising in connection with it. On all levels the activities of the American Diabetes Association are directed and controlled entirely by the medical profession.

Dr. Morse states that the success of the previous diabetes detection drives in Kentucky has been such as to bring national recognition to KSMA. In the four years of its existence more than 700 new diabetics have been discovered. Over 100,000 tests have been given.

"The whole success of this life-saving activity, both past and future, depends solely on the fine work of the individual physicians across the state and the diabetes committees of the respective counties," Dr. Morse said.

Diabetes detection was given impetus again at the KSMA 1955 State Fair Exhibit. St. Louis Drepak strips were distributed to persons requesting them for impregnation, return and analysis. Several thousand people availed themselves of the opportunity this distribution afforded.

Other members of the KSMA Diabetes Committee in addition to Dr. Morse are: Herald K. Bailey, M.D.; Philip Carter, M.D.; Guinn S. Cost, M.D.; Marcus A. Coyle, M.D.; Thomas J. Crume, M.D.; Franklin B. Moosnick, M.D.; Martin Palmer, M.D.; Stanley Simmons, M.D.; and Edward Smith, M.D.

Medico-Legal Institute Planned At U of K, October 28-29

"The Lawyer and the Doctor in the Courtroom," will be the theme of the Medico-Legal Institute, sponsored by the University of Kentucky College of Law and a joint committee of the Fayette County Bar Association and the Fayette County Medical Society, at the University of Kentucky, October 28-29.

The program for the two day affair will feature outstanding speakers as well as panel and group discussions. On Friday the 28th a mock trial will be held.

The maximum registration fee is $10.00 and reserved tickets for the Rice-Kentucky football game to be played Saturday the 29th can be bought for $3.50 each. For more complete information write to: Medico-Legal Institute, College of Law, University of Kentucky, Lexington.

Network Medical T-V Shows Schedules Announced

Five regularly scheduled network television programs about the medical profession have been announced for the 1955-56 season according to a report from the AMA.

Four of these programs to be carried by NBC-TV and the time they can be seen are:

"Medic"—This medical television show can be seen at 9 p.m. (Eastern time) three Mondays out of four.

"March of Medicine"—This program, presented in cooperation with the AMA, can be seen the first week of November and the first week of December.

"Dr. Spock"—Benjamin Spock, M.D., will present a series of half hour telecasts on child care and development, Sundays at 3 p.m. (Eastern time). The inaugural program is scheduled for October 9.

"Medical and Health News With Howard Whitman"—Howard Whitman, author and commentator, will present ten minutes of the latest medical and health news each Wednesday morning on the "Home" show.

ABC-TV will carry one show pertaining to the medical profession. The show, "Medical Horizons," can be seen each Monday at 9:30 P.M. (Eastern time). The series will give re-

ports via "live" remote pickups from medical schools and research institutions.

Several programs, pertaining to the medical profession and filmed in advance, will be used this fall for "spot" placement on local stations. Two such films are Lloyd C. Douglass "Dr. Hudson's Secret Journal," and "It's Fun to Reduce," a program dealing with problems of overweight.

According to recent surveys made by the AMA, ten state medical societies and 99 county medical societies throughout the United States are currently putting on local television shows or planning to do so in the future.

Five Doctors' Office Buildings Proposed in Louisville

Proposed plans for five new doctors' office buildings in Louisville were recently made public by published reports.

A New York building firm announced it had plans for two buildings—one in the Medical Center area and the other near Eastern Parkway. They estimated these structures would cost between $3,000,000 and $4,000,000 and would accommodate 175 physicians.

Tentative plans for two other doctors' buildings proposed by Louisville firms were also announced. The two sites mentioned for the buildings were Eastern Parkway and Dahlia and Bardstown Road at Tyler Lane.

Proposals for a fifth building on Gardiner Lane at Bardstown Road were also announced, according to the published reports.

Taylor County Medical Society Plans Series of Forums

The Taylor County Medical Society is planning a series of public medical forums in Campbellsville for October 21 and 28 and November 4 and 11 in cooperation with the Campbellsville **News-Journal**, according to Henry F. Chambers, Jr., M.D., society president.

This will be the second year for such a series of public meetings on medical subjects. W. Burr Atkinson, M.D., chairman of the society's forum committee, reports that one half of the society membership will serve as the panel for the forums, each doctor thus participating twice during the series.

Topics which have been listed as prospective subjects for the forums include Infantile Paralysis, Mental Illness, Diabetes, Goiter, Appendicitis, X-ray Examination, Accidents, Cancer of the Skin, Cancer of the Bowels, Fractures, Arthritis and Rheumatic Fever.

Budget Bureau's Review Shows Rise in VA, HEW Spending

An increase in the spending rate of both the Veteran's Administration and the Department of Health, Education, and Welfare was noted in the Budget Bureau's review of the current federal budget, according to a report of the AMA Washington office.

In the VA, a rise in every major category of veteran's benefits was noted. The hospital and medical programs were up $72 million because of higher pay rates for federal employees and care for more patients.

The bureau estimates the HEW budget will run $152 million more this year than last. One hundred and three million of this sum is attributed to health programs. This includes $35 million for polio vaccine grants and operation of the voluntary vaccine distribution program.

Plan to Simplify Insurance Forms Nearing Successful Conclusion

A two-year cooperative effort by the insurance business and the medical profession to streamline health insurance claim forms used by physicians is nearing a successful conclusion, according to Richard J. Eales, New York, of the Health Insurance Council.

The KSMA Committee on Insurance has advocated the uniform claim blank for several years. The House of Delegates has approved the recommendation of the insurance companies to abbreviate the health insurance forms.

The council reports that its special committee on uniform claim forms has submitted for acceptance by insurance companies the final drafts of two all-purpose and two abbreviated physician statement forms. One all-purpose and one abbreviated form are for use with group insurance policies, and the other two are for individual and family policies.

The AMA Council on Medical Service has approved two other short forms. These have been accepted by companies writing the majority of the commercial health insurance business in America. One of these forms covers physicians' statements in connection with group surgical benefits and the other form covers individual or family hospital, medical or surgical benefits.

To achieve uniformity in questions calling for answers by the physician, and to compensate for differences in company requirements due to variations in coverages, both basic and

optional questions have been included in the forms.

For copies of the new form contact the KSMA Headquarters office.

Assistance Grants Established To Aid Young Physicians

The Sears-Roebuck Foundation in cooperation with the AMA has recently established assistance grants to help young physicians who lack capital and business "know-how" set up practices, it was reported by the AMA.

The plan, expecially planned for small or medium sized towns or rural communities, will offer unsecured ten year loans up to $25,000 to physicians unable to get full local financing.

A medical advisory board appointed from nominations by the AMA Board of Trustees will screen all applicants. Each applicant must submit information about the area where he intends to locate.

Kentucky physicians wishing to apply for assistance should send applications to the office of the region in which the proposed medical practice is to be established. Address applications to the Director, Sears-Roebuck Board at these locations: Pacific Coast Region—2650 Olympia Blvd., Los Angeles 54; Southwestern—1409 South Lamar St., Dallas 2; Midwest— 8 E. Congress St., Chicago 5; South—675 Ponce de Leon Ave., Atlanta; East—4640 Roosevelt Blvd., Philadelphia 32.

All the repayments of the plan, headed by J. L. Blasingame, M.D., Wharton, Texas, and Edwin S. Hamilton, M.D., Kankakee, Illinois; will be used for further grants.

Accreditation Commission Lists Staff Meeting Requirements

The three methods of fulfilling the medical staff meeting requirement that will fit any size hospital seeking accreditation, were recently listed in a Bulletin of the Joint Commission on Accreditation of Hospitals. They are:

Monthly Meetings of the Entire Active Medical Staff: This method is particularly suited in the hospital of less than seventy-five beds which is not departmentalized. It is also well suited in the hospital where the medical staff is small and is organized to function as a committee of the whole.

Monthly Departmental Meetings and Quarterly Meetings of the Entire Active Staff: This method may be adopted when a hospital is well organized and departmentalized, and when it has been found to be more effective than the monthly meetings of the entire active medical staff for adequate and efficient review of the work of the staff. More frequent departmental meetings will depend upon the size of the hospital and the number of patients treated. Many hospitals have found it advisable to hold weekly departmental meetings.

Monthly or More Frequent Review of the Clinical Work by the Medical Records and Tissue Committees (or by an Audit Committee which combines the functions of these two committees), plus monthly meetings of the executive committee of the medical staff and quarterly meetings of the entire active medical staff. The bulletin pointed out that if fully carried out, this method would be effective in evaluating the quality of patient care.

The bulletin listed several aspects of the hospital staff meetings that cause confusion and misunderstanding and ways to remedy them. They are:

1. Frequency, regularity and multiplicity of meetings: Not less than twelve meetings in each calendar year are necessary. Meetings should be held during summer vacation months also. As to multiplicity of meetings the bulletin noted that because of the complaint of the medical profession concerning the hardship of attendance at staff meetings at several hospitals, there is a growing feeling that physicians should limit their active staff appointments to no more than two hospitals. Hospital administration should cooperate by making beds available to physicians with other than active staff appointments.

2. Combined Hospital Medical Staff Meetings: When two or more hospitals in an area have identical medical staffs they may decide to combine staff meetings to save time. According to the Accrediting Commission this is not acceptable for it does not allow correct evaluation of the care given patients in a particular hospital.

3. Attendance at Meetings: Members of active medical staff should attend at least seventy five per cent of the meetings unless excused for sickness, absence from the community or medical emergencies.

The standard of the Commission on Accreditation on the attendance of staff meetings pertains to active medical staff members. The local hospital decides whether the attendance of the associate staff members is required. The Commission does not require attendance at departmental meetings and clinicopathologic conferences. These are required by the Council on Medical Education and Hospital of the American Medical Association for training programs.

Dr. Gaither Announces Appointees For KSMA Committees

Gant Gaither, M.D., Hopkinsville, the new 1955-56 K.S.M.A. president, has announced his committee appointments for the new associational year.

The president pointed out that he was making these appointments at an early date in order that the work of the association carried on by these committees would not be interrupted.

The by-laws provide for the appointment of certain committees by the Council. The personnel of these committees were elected at the final meeting of the Council on September 29 and the announcement will appear in the November issue of the Journal.

Standing Committees

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(1955-56 K.S.M.A. president)
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R. J. Noer, Louisville
Charles C. Rutledge, Pikeville

Committee to Study the Constitution and By-Laws

Richard Rust, Newport, Chairman
R. H. Baker, Louisville
Joe M. Bush, Mt. Sterling
Cooley L. Combs, Hazard
Wyatt Norvell, New Castle
Ernest C. Strode, Lexington

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Kentucky Committee for Contribution to American Medical Education Association

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M. O. Crowder, Owensboro
Keith Crume, Bardstown
Gant Gaither, Hopkinsville
Murray Kinsman, Louisville
George C. McClain, Benton
Harold Parker, Maysville
Edward H. Ray, Lexington
James A. Ryan, Covington
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Irving A. Gail, Lexington
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Committee on Corporate Practice of Medicine

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Robert Orr, Mayfield

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State Men Attend PR Institute

Members of three Kentucky county medical societies and personnel from the Jefferson County Society and the K.S.M.A. headquarters office attended the two-day Public Relations Institute sponsored by the Public Relations Department of the A.M.A. in Chicago, August 31 and September 1.

Matthew C. Darnell, Jr., M.D., Lexington, represented Fayette County, Carroll Witten, M.D., Louisville, attended from Jefferson County, and Ralph D. Lynn, M.D., Elkton, represented Todd County. K.S.M.A. Field Secretary, J. G. Miller, took part in a panel on the August 31 morning program.

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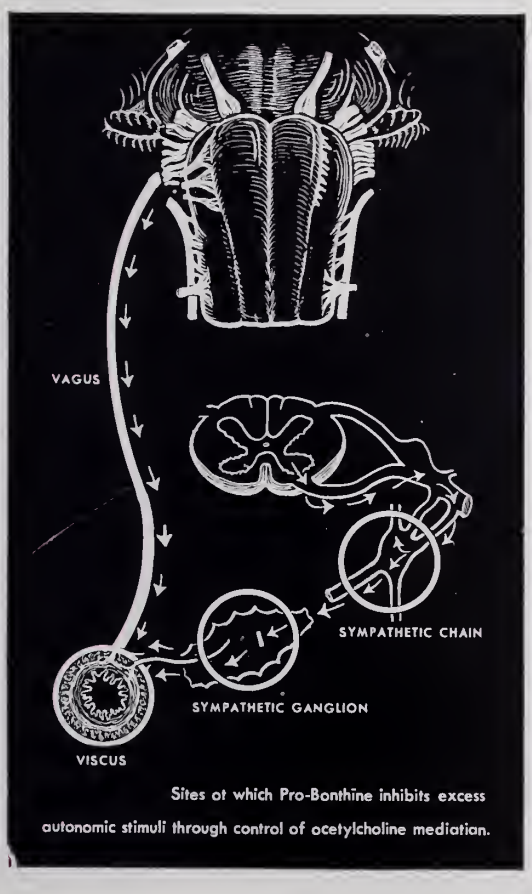
Pro-Banthine consistently controls gastrointestinal hypermotility and spasm and the attendant symptoms.

Pro-Banthine is an improved anticholinergic compound. Its unique pharmacologic properties are a decided advance in the control of the most common symptoms of smooth muscle spasm in all segments of the gastrointestinal tract.

By controlling excess motility of the gastrointestinal tract, Pro-Banthine has found wide use[1] in the treatment of peptic ulcer, functional diarrheas, regional enteritis and ulcerative colitis. It is also valuable in the treatment of pylorospasm and spasm of the sphincter of Oddi.



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Roback and Beal[2] found that Pro-Banthine orally was an "inhibitor of spontaneous and histamine-stimulated gastric secretion" which "resulted in marked and prolonged inhibition of the motility of the stomach, jejunum, and colon. . . ."

Therapy with Pro-Banthine is remarkably free from reactions associated with parasympathetic inhibition. Dryness of the mouth and blurred vision are much less common with Pro-Banthine than with other potent anticholinergic agents.

In Roback and Beal's[2] series "Side effects were almost entirely absent in single doses of 30 or 40 mg. . . ."

Pro-Banthine (β-diisopropylaminoethyl xanthene-9-carboxylate methobromide, brand of propantheline bromide) is available in three dosage forms: sugar-coated tablets of 15 mg.; sugar-coated tablets of 15 mg. of Pro-Banthine with 15 mg. of phenobarbital, for use when anxiety and tension are complicating factors; ampuls of 30 mg., for more rapid effects and in instances when oral medication is impractical or impossible.

For the average patient one tablet of Pro-Banthine (15 mg.) with each meal and two tablets (30 mg.) at bedtime will be adequate. G. D. Searle & Co., Research in the Service of Medicine.

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1. Schwartz I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: Gastroenterology *25*:416 (Nov.) 1953.

2. Roback, R. A., and Beal, J. M.: Gastroenterology *25*:24 (Sept.) 1953.

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AMA Official Releases Report on County Medical Societies

A study of the size and character of "county" medical societies within the state associations has been released by Frank G. Dickinson, Ph.D., director of the AMA Bureau of Medical Economic Research.

The study was made by request, according to Dr. Dickinson, to assist state associations in any contemplated reorganization of their component societies. He emphasized that suggestion of such reorganization is outside the bureau's province.

The study shows that the median number of members in county societies is 21. It reveals that 30 state medical associations have engaged extensively in combining small counties into larger component societies. Of the 18 which have not created combination societies, eight have virtually no small counties.

There are 127 counties in the nation with less than five members. Of these, 47 are in Kentucky. Another 46 are accounted for by Alabama, Arkansas, Georgia, Kansas, Missouri, and Nebraska. The balance are scattered.

Ky. M.D.'s Attend V.A. Conference

David Cox, M.D., Louisville, chairman of the K.S.M.A. Veterans Committee, lead a small delegation of Kentucky physicians to an 11-state conference on veterans' affairs held in Indianapolis, Indiana, Tuesday, September 27.

The conference was sponsored by the joint liaison committee of the Indiana State Medical Association and other interested groups. Elmer Hess, M.D., Erie, Pennsylvania, A.M.A. president, addressed the conference.

SMA Members To Tour Mexico

The Southern Medical Association has announced a post convention tour to Mexico following its 1955 Annual Meeting in Houston on November 14-17.

Any physician expecting to attend the Southern Medical Association meeting who is interested in visiting Mexico, may secure an official tour folder by writing directly to the headquarters office of the Association, Empire State Building, Birmingham, Alabama.

UMW Medical Payments Reduced

The United Mine Workers Welfare and Retirement Fund spent less money on hospital and medical care of its members and their dependents this year than last, according to a report from the AMA Washington office. The decrease of $9,436,254 was explained in part due to more efficient operation and decline in the number of patients treated.

The first UMW hospital opens October 17, in Middlesboro. It will be a 79-bed unit.

Dr. Rehm on International Panel

Warren S. Rehm, M.D., Louisville, was a member of an international panel of speakers at a meeting sponsored by the University of Wisconsin School of Medicine in Madison, August 29-31. Dr. Rehm, who is professor of physiology at the University of Louisville School of Medicine, discussed the formation of hydrochloric acid in the passage of electrically charged molecules in and out of body cells. Among the speakers were physicians from Oxford, Dublin, Copenhagen and Bern.

Farm-City Week is October 23-29

October 23-29 has been scheduled as Farm-City Week. The AMA has suggested that local medical societies take part in the observance of this week by helping the Farm-City Conference build better relationships between farm and city groups.

The AMA listed several ways for a medical society to contribute to the success of the plan. They are: (1) Develop health education programs for city and rural youth groups; (2) Schedule addresses by society members to civic groups; (3) Plan radio and television interviews and discussions; (4) Arrange tours of hospitals, clinics and other facilities by farm and city groups, and (5) Instigate vocational guidance programs in secondary schools.

KSMA Welcomes 18 New Members

Eighteen physicians were recently welcomed to the membership of the Kentucky State Medical Association. The new members are:

Marvin A. Bowers, M.D., Louisville

Harold W. Bradshaw, M.D., Louisville

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John E. Hingeley, M.D., Lawrenceburg
Peggy Jean Howard, M.D., Louisville
Rand C. Johnson, M.D., Louisville
Ji-Toong Ling, M.D., Louisville
Leonard C. Lund, M.D., Hopkinsville
J. S. Parker, M.D., Louisville
Vernon D. Pettit, M.D., Paducah
William Russell, Jr., M.D., Bowling Green
Arthur J. Shulthise, M.D., Fairdale
Robert S. Tillett, M.D., Louisville
Stuart Urbach, M.D., Louisville
A. Neal Ward, M.D., Paducah
John Watts, M.D., Bowling Green
John A. Wimberly, M.D., Princeton
K. Vincent Ziegler, M.D., Louisville

The 15,400 physicians and dentists of Austria recently undertook vigorous methods to fight the medical provisions of the new Austrian Social Security Law. Dressed in their white coats, they marched through the streets of Vienna, distributed leaflets giving their complaints, and even voiced their views from the streets by loud speaker cars. During the two day strike they refused medical treatment except to the critically ill and injured.

News Items

John A. Wimberly, M.D., formerly of Louisville, opened an office in Princeton on July 11. Dr. Wimberly graduated from the University of Louisville School of Medicine in 1952. He served with the Army two years. He interned at the Tampa Municipal Hospital, Tampa, Florida, had one year of training in Lexington and practiced a year in Vicksburg, Mississippi.

Clyde Sparks, M.D., president of KSMA, addressed members of the Ashland Optimist Club at a luncheon in the Henry Clay Hotel August 18. Dr. Sparks told the group that the KSMA would try to solve one of Kentucky's big problems, providing hospital medical care for the indigent, by presenting a proposed program to the 1956 State Legislature.

Otis M. Richardson, M.D., a graduate of the University of Louisville Medical School, has been appointed full-time director of the X-ray department of Hardin Memorial Hospital in Elizabethtown. Dr. Richardson served his internship at Mercy Hospital, Toledo, Ohio.

Lloyd O. Larsen, M.D., has opened offices in Lexington as a general surgeon. Dr. Larsen, who recently served as surgeon at Eastern State Hospital and surgical assistant at Central Baptist Hospital, was graduated from the College of Medical Evangelists in Los Angeles, Calif., in 1939. He interned at Kingston, N. Y., and served his surgical residency at Wyckoff Heights Hospital, Brooklyn, New York. Dr. Larsen received his MS degree in surgery at New York Medical College in 1954.

James E. Shaw, M.D., has become associated with **William Bruce Hamilton, M.D.,** in the practice of medicine at Shepherdsville. Dr. Shaw, a native of Kokomo, Indiana, graduated from the University of Louisville School of Medicine in 1954 and served an internship at the Louisville General Hospital following his graduation.

Louis S. Sonne, M.D., has begun the practice of his specialty, urology, in Louisville. Dr. Sonne is a graduate of the University of Louisville School of Medicine, class of 1946. He interned at the St. Joseph Hospital in Louisville following graduation and had residency training in general surgery at the same hospital from 1948 to 1951. He served a residency in urology at the Veterans Administration Hospital, Louisville from 1951 to 1952 and from 1954 to 1955, the interim having been spent in the U. S. Air Force.

Harry Stambaugh, M.D., is leaving this month for Memphis, Tennessee, where he will do postgraduate work in plastic surgery. He has been associated with the Prestonsburg Hospital for the past two months. Dr. Stambaugh received his medical degree from the University of Louisville School of Medicine in 1954 and completed his internship at the Good Samaritan Hospital in Lexington this year.

Harold Woodson Bradshaw, M. D., who recently completed four years of resident training in surgery at the Louisville General Hospital, has located in Louisville. Dr. Bradshaw graduated from the University of Louisville School of Medicine in 1950, and interned in Detroit at the Receiving Hospital in 1951.

*Trademark for the Upjohn brand of prednisone (delta-l-cortisone)

W. N. Bennett, M.D., a graduate of the University of Louisville, class of 1954, has opened medical offices in Middlesboro. Dr. Bennett interned at the Philadelphia General Hospital following his graduation.

Robert L. Davis, M.D., has opened offices in Winchester with practice limited to general surgery. He graduated from the University of Louisville School of Medicine in 1950 and interned at the Kentucky Baptist Hospital in Louisville, where he also served a residency. During World War II, Dr. Davis spent 38 months in the Navy.

Millard C. Loy, M.D., has resumed practice in Columbia after his discharge from the army. Dr. Loy graduated from the University of Louisville in 1946 and interned at St. Joseph Infirmary in Louisville. While in the army he served as chief medical officer of the medical-examining section of the Georgia Military District and as an obstetrician and gynecologist at the United States Army Hospital in Fort Campbell.

William Russell, Jr., M.D., has recently opened offices in Bowling Green for general practice. Dr. Russell, who completed his internship at Jackson Memorial Hospital in Miama, Florida, was graduated from the University of Louisville Medical School in 1954.

John C. Gunn, M.D., a native of Mississippi, has begun practice in Williamstown with **C. C. Waldrop, M.D.,** Dr. Gunn, a 1954 graduate of the University of Arkansas Medical School, interned at St. Elizabeth Hospital in Covington.

Charles N. Floyd, M.D., who opened offices in July in Richmond with his father **John B. Floyd, M.D.,** has moved to Gulfport, Mississippi.

Thomas A. Weldon, M.D., a 1951 graduate of Strich School of Medicine of Loyola University, has completed three years of training in psychiatry and neurology in Topeka, Kansas. Dr. Weldon is now on the staff of Central State Hospital, Lakeland.

David C. Asher, M.D., has begun practice in Pineville with **George M. Asher, M.D.,** and **James S. Golden, Jr., M.D.** Dr. David Asher, who was graduated from the University of Louisville School of Medicine in 1953, served his internship at Good Samaritan Hospital in Lexington in 1954. He has just finished a year of surgical residency at Good Samaritan.

William D. Epling, M.D., who completed his internship June 30 at Good Samaritan in Lexington, has begun practice in Russell Springs. Dr. Epling is a 1954 graduate of the University of Louisville Medical School.

Col. Louis F. Williams succeeded **Col. B. N. Riordon** as the commander of the Louisville Medical Depot. Col. Williams is a native of Cumberland, Tennessee. He joined the Army in 1923 and was commissioned in 1931.

"Medicine in the News," an eight page news magazine published by the Schering Corporation, is a monthly publication that presents medical information in an accurate, easy to read style. The publication first appeared six years ago.

COUNTY SOCIETY REPORTS

CALLOWAY

C. V. Thompson, Blue Cross Representative, presented a discussion on "What is Blue Cross and Blue Shield?," at the last meeting of the Calloway County Medical Society on August 2.

Hugh Houston, M.D., submitted to the library a copy of "A Report By The Kentucky State Medical Association on a Study of Indigent Medical Care in Kentucky."

J. A. Outland, M.D., reported that the second Salk polio shot was being given to local and county children.

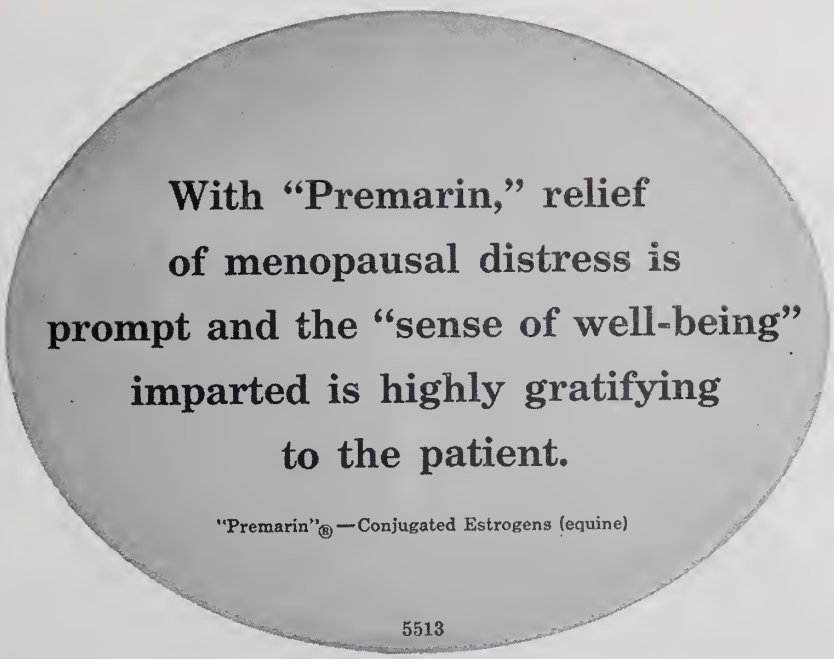
Robert Hahs, M.D., Secretary

LETCHER

Harold Kleinert, M.D., and Herman Meredith, X-ray technician of the Louisville Cancer Clinic, presented the program at the special meeting of the Letcher County Medical-Dental Society, August 17.

Dr. Kleinhert explained the cancer work being done in Kentucky. Films on skin cancer were shown.

Present at the meeting were the following



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R. Dow Collins, M.D., Secretary

SCOTT

James B. Stith, M.D., of Lexington, was the guest speaker at the regular monthly meeting of the Scott County Medical Society at the John Graves Ford Memorial Hospital at Georgetown, Thursday, August 4.

Dr. Stith lectured on "The Cause and Treatment of Prolonged Labor." Following the presentation of his paper there was a discussion by the members of the Society.

The Hospital Committee reported having gone before the Fiscal Court and having the lower floor of the hospital opened to receive patients.

Present at the meeting were the following physicians: W. S. Allphin, J. C. Cantrill, W. S. Johnson, C. R. Lewis, A. F. Smith, H. G. Wells, and F. W. Wilt.

H. V. Johnson, M. D., Secretary

SCOTT

Ullin Leavel, M.D., Lexington, presented a paper on the "Diagnosis and Treatment of Superficial Epithelioma," at the last meeting of the Scott County Medical Society, September 1.

The Society voted at the meeting to oppose the order of the State Board of Health, giving free polio vaccine to children one to nineteen years old.

Present at the meeting were the following physicians: A. F. Smith, C. R. Lewis, J. C. Cantrill, F. W. Wilt, W. S. Allphin, and H. V. Johnson.

H. V. Johnson, M. D., Secretary

WARREN-EDMONSON-BUTLER

William R. Russell, Jr., M.D., and John Watts, M.D., were accepted into the Warren-Edmonson-Butler Society at the last regular meeting on August 9. Martin Wilson, M.D., vice president, presided.

G. M. Wells, M.D., discussed the importance of more accurate statistical evidence of immunization in the county. There was no scientific program.

Charles M. Francis, Secretary

WARREN—EDMONSON—BUTLER

John Bell, M. D., Louisville, presented a paper entitled "Recent Advances in Psychiatric Treatment" at the regular monthly meeting of the Warren-Edmonson-Butler County Medical Society on June 14.

J. Y. Barbee, M. D., president of the Society, presided. It was brought to the attention of those present that enough poliomyelitis vaccine was available to start the immunization program again. This was discussed but no action was taken.

The Society was invited to Russellville on July 12 for the Sixth Councilor District meeting.

Charles M. Francis, M. D., Secretary

UNION

Lad Mezera, M. D., Louisville, director of the Division of Maternal and Child Health of the State Department of Health, spoke on immunization and child health throughout the state at the Union County Medical-Dental Society, which met at Our Lady of Mercy Hospital in Morganfield on June 21. Dr. Mezera also discussed the ratio of patients to physicians within the state.

The Society voted to invite the Cancer Mobile unit to the county for another year.

There were nine members present at the meeting.

Charles P. Bartley, M. D., Secretary

In Memoriam

L. E. SMITH, M. D.

Louisville

1878-1955

Dr. L. E. Smith, Louisville, long known as "Mr. Tuberculosis Control," died August 30 at Kentucky Baptist Hospital of heart disease. He was 76.

Dr. Smith served for 20 years as executive secretary of the Kentucky Tuberculosis Association. He continued this work after his retirement four years ago.

After graduating from Johns Hopkins University Medical School in 1915, he became a medical missionary to Puerto Rico, then to Africa, where he served for seven years. Later

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he returned to the United States where he went into home mission work. In 1928 he became Breathitt County health officer.

MARCUS PHELPS, M. D.

Leitchfield

1885—1955

Dr. Phelps died at his home in Leitchfield on July 24, after approximately a year's illness. He was 70 years of age.

Dr. Phelps graduated from the University of Louisville Medical School in 1907.

R. L. WOODWARD, M. D.

Louisville

1883 - 1955

Dr. Woodward died at St. Joseph Infirmary in Louisville, June 4, 1955. He was 72.

A native of Lexington, Dr. Woodward was graduated from Kentucky University (now Transylvania College), and in 1903 received his degree of doctor of medicine from the University of Louisville School of Medicine.

He came to Louisville in 1912 to practice general surgery. For 31 years he was an associate professor of orthopedic surgery at the University of Louisville School of Medicine. He had been a member of the staff of Kosair Crippled Children's Hospital since its opening in 1926, and was president of the staff in 1952.

B. M. BROWN, M. D.

Madisonville

1888—1955

Dr. Brown, retired former Hazard physician, died at his home in Madisonville on July 11, 1955. He was 67.

Dr. Brown, a graduate of the University of Louisville School of Medicine, had studied in Vienna, Austria. At one time he served as State Highway Commissioner. Although he retired from the practice of medicine about 10 years ago, he often took over the practice of C. L. Combs, M. D., when the latter had to be away from Hazard.

JOHN WESLEY HOCKER, M. D.

Chattanooga, Tenn.

1904 - 1955

Dr. Hocker died April 29 at his home in Chattanooga of a heart attack, at the age of 51.

Dr. Hocker was a native of Hustonville, Kentucky. He received his medical degree from Vanderbilt University, 1931, and served as an intern at Vanderbilt Hospital in 1931-32. At the time of his death he was head of the Hocker Clinic in Chattanooga.

O. A. FRICKMAN, M. D.

Newport

1868—1955

Dr. Frickman died at Speers Hospital, Dayton, Ohio, on June 27. He was 87 years of age at the time of his death.

Dr. Frickman was a graduate of the Ohio Medical College, class of 1896. He was on the staff of Speers Hospital for many years, and was a past member of the Cincinnati Academy of Medicine. He served as president of the Newport Board of Education and was a member of the Campbell-Kenton Medical Society.

PORTER V. BALLOU, M. D.

Bowling Green

1874—1955

Dr. Ballou, 81, died at Howard Clinic Hospital at Glasgow on June 5. He retired from practice of medicine in 1942.

He graduated from the University of Louisville School of Medicine and attended Johns Hopkins University and Tulane. He practiced in Louisville after serving in World War I, later practicing in Russell County, before moving to Warren and retiring to a farm.

CHARLES VERNON STARK, M. D.

Harlan

1879—1955

Dr. Stark died in Harlan on June 1, following a long illness. He was 76 years old.

He was a graduate of the University of Tennessee Medical School. He had been active in civic affairs in his community until the past two years, and was a former superintendent of the Evarts Congregational Church.

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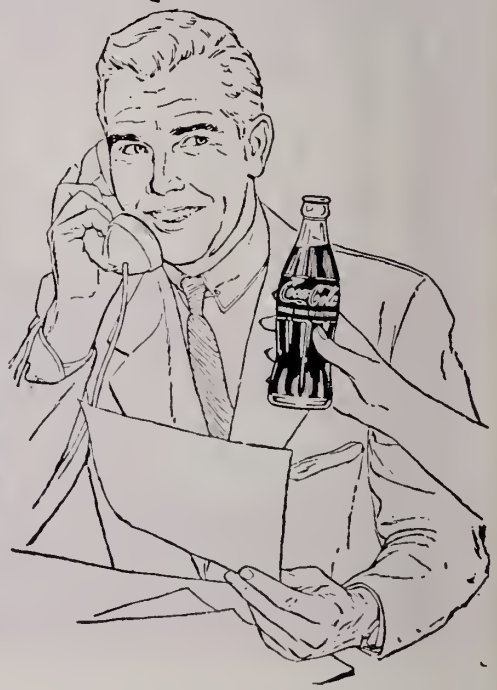

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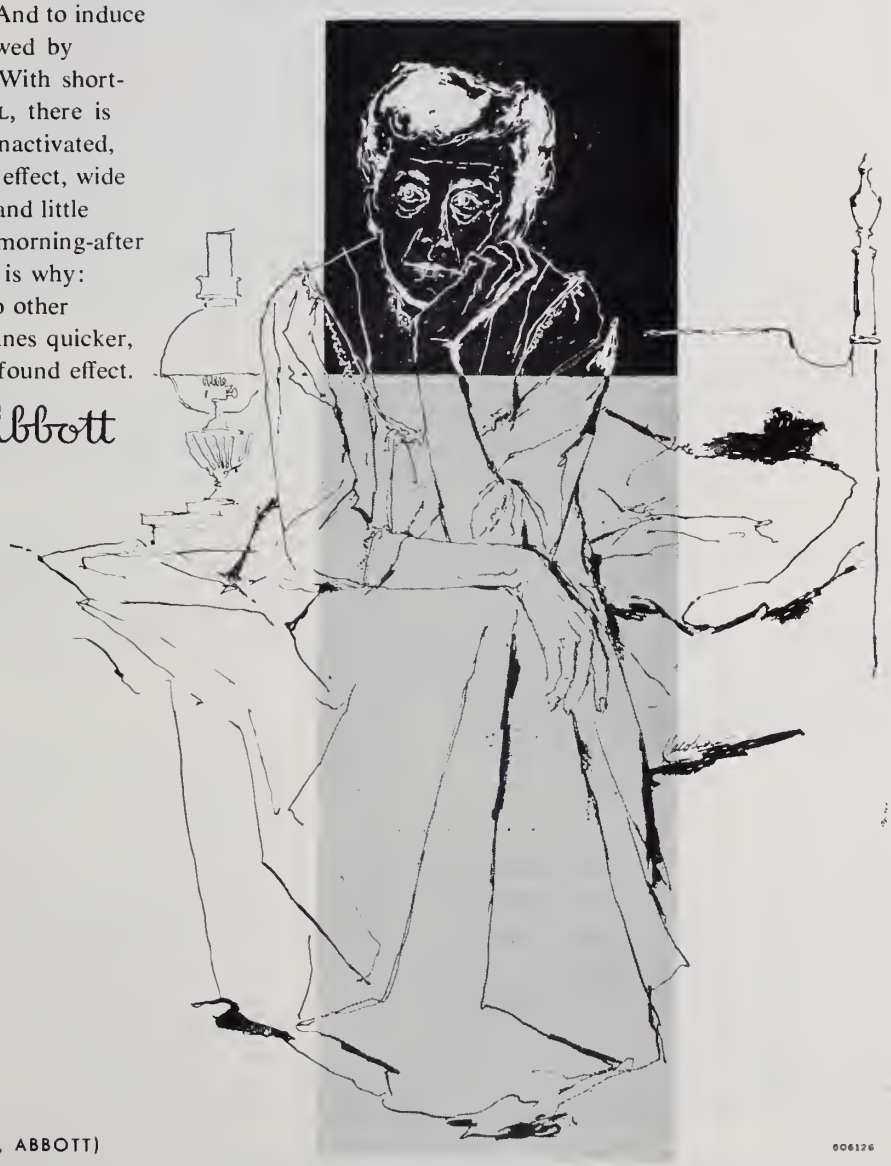

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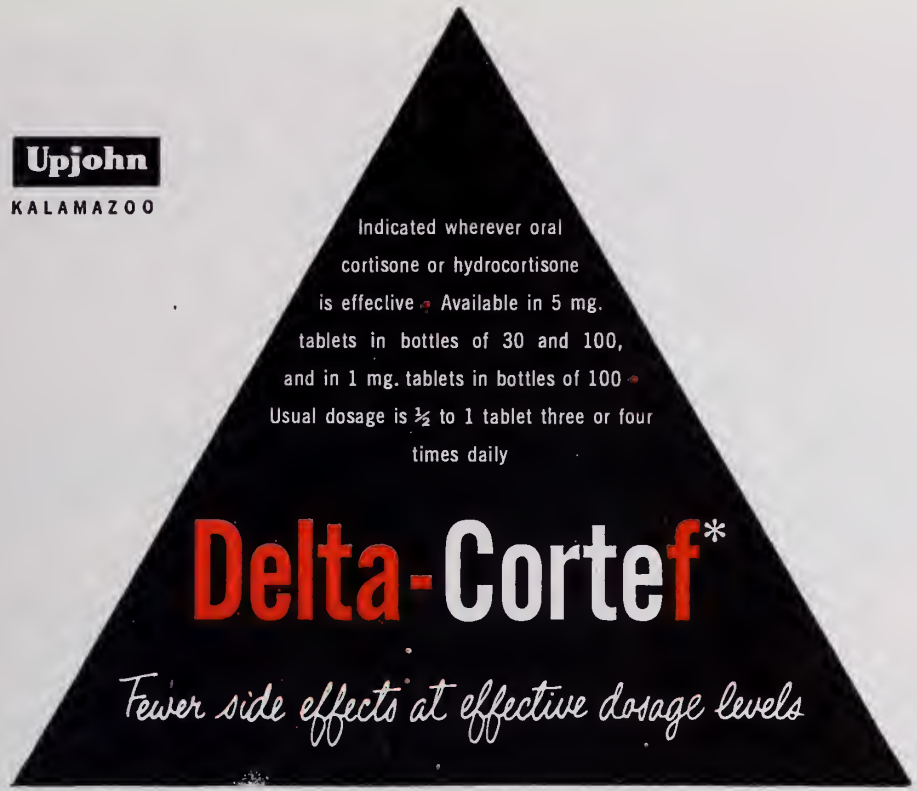

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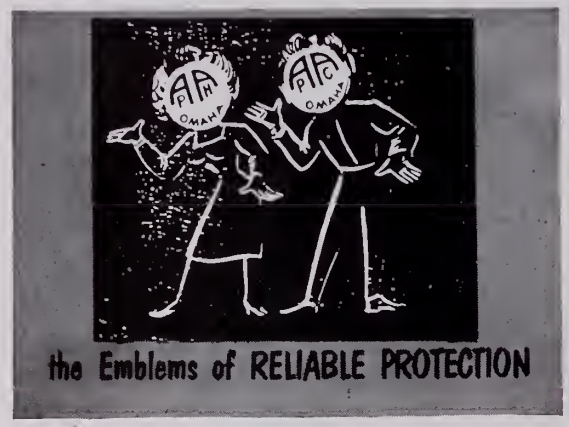

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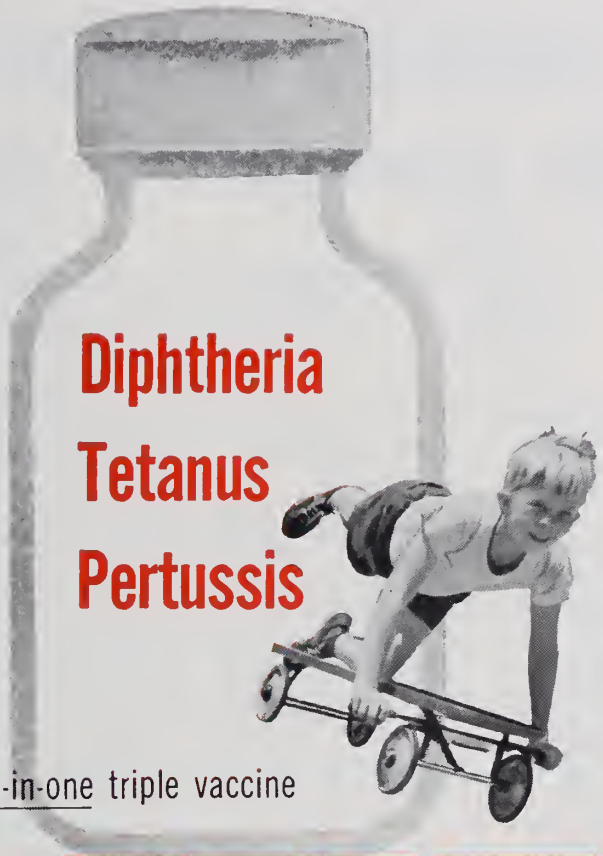

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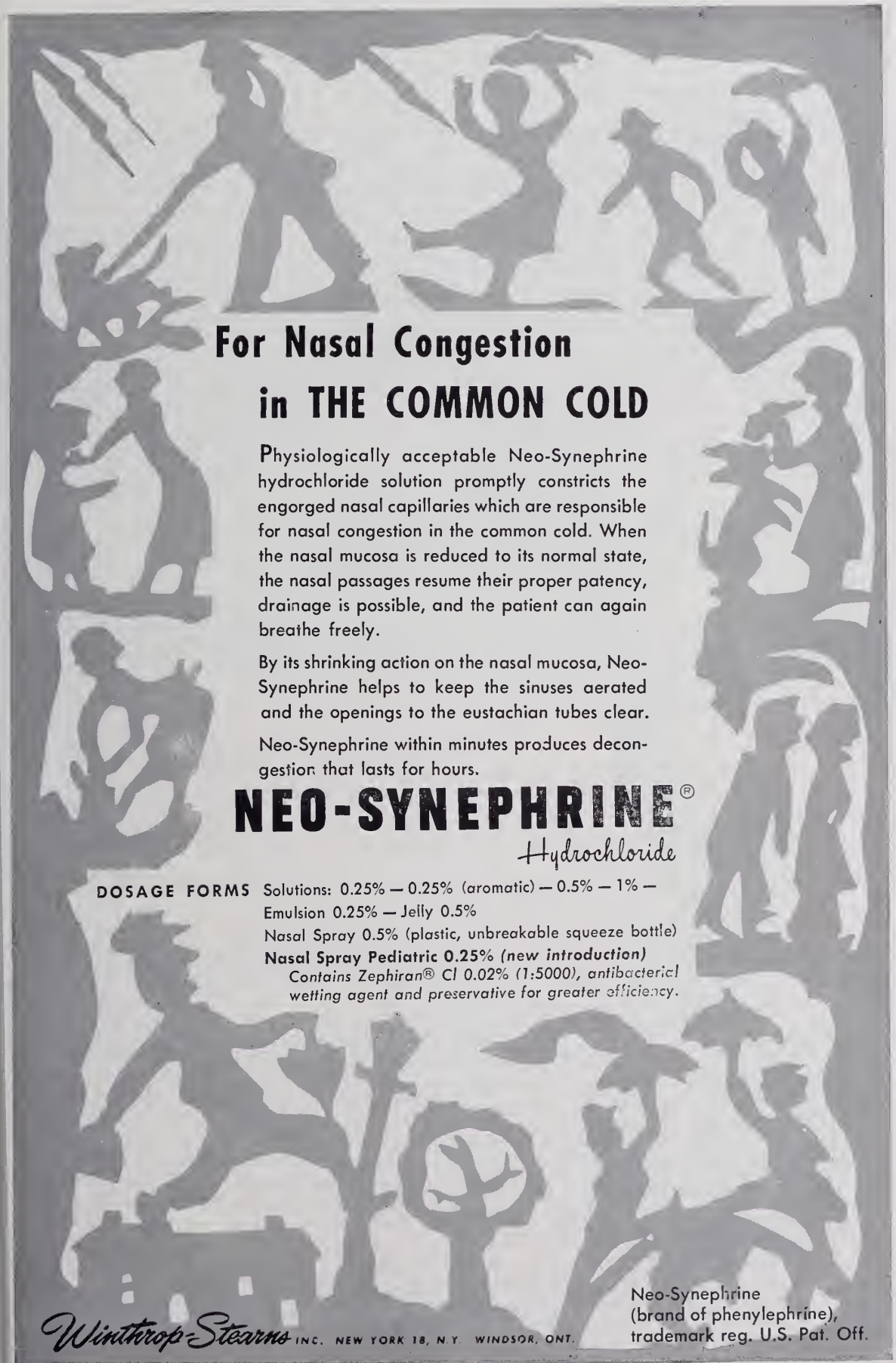
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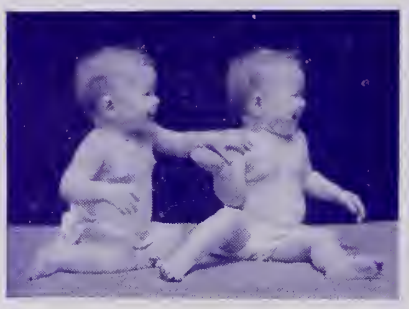

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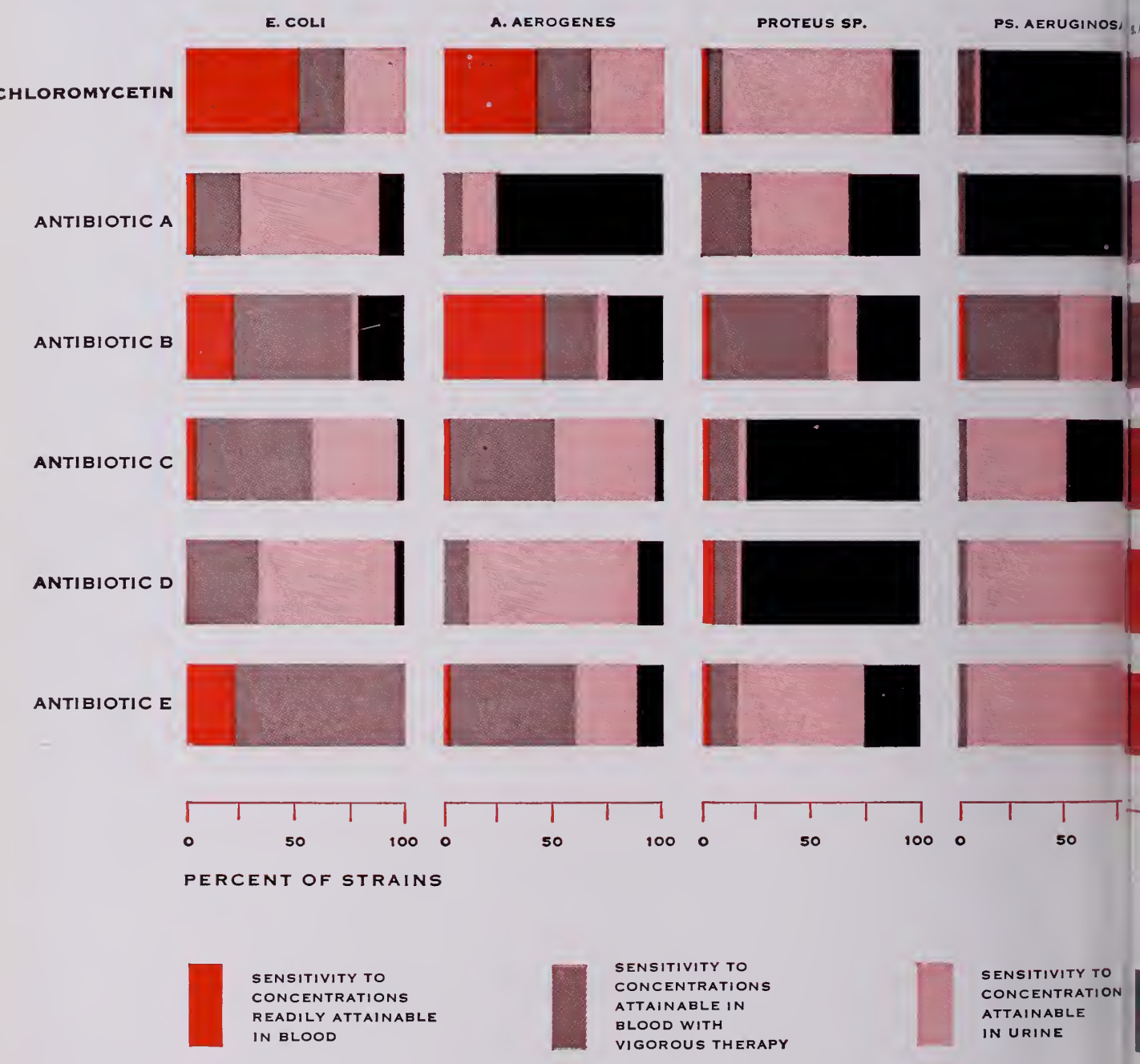

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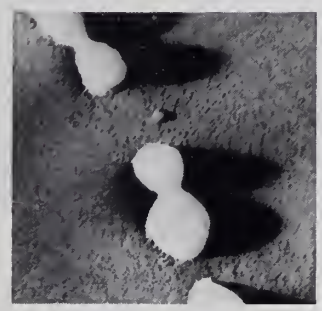

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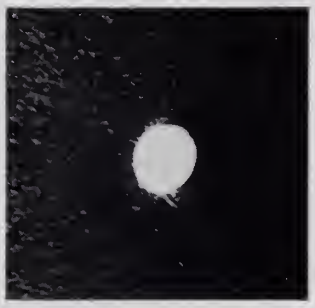

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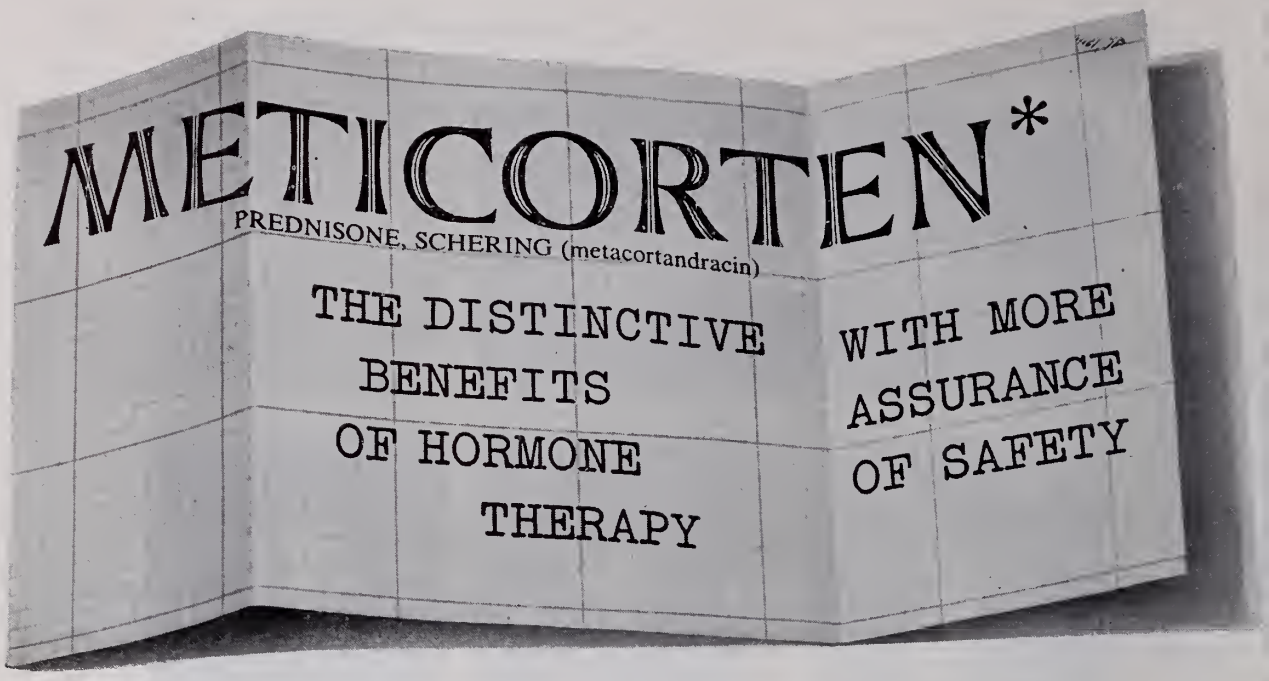

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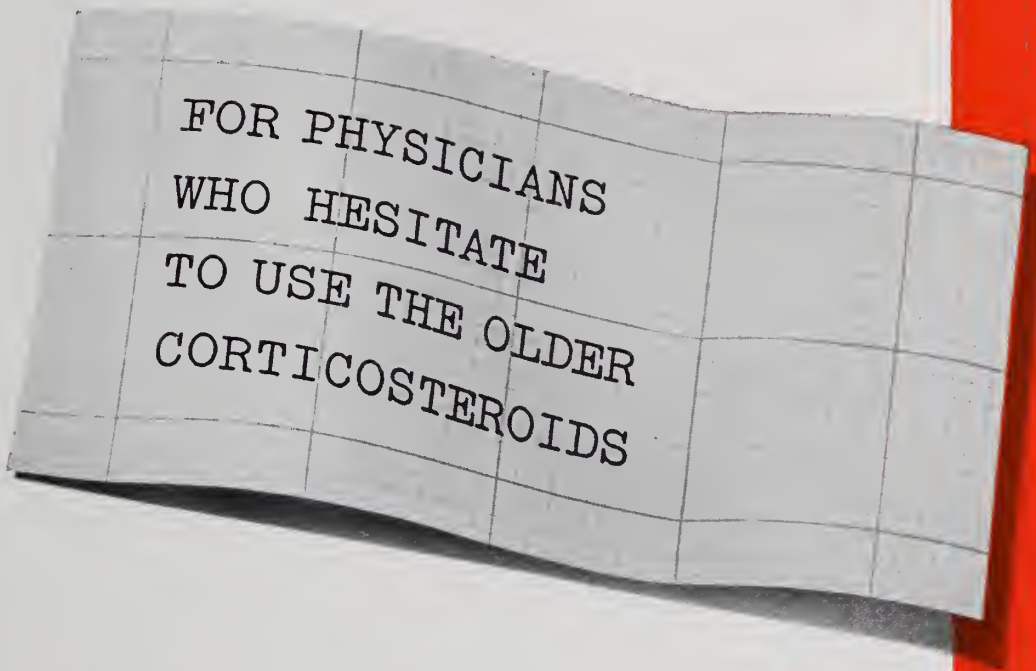
ch as acute disseminated lupus erythematosus, acute pemphigus, extensive
opic dermatitis and other allergic dermatoses, and certain eye disorders



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President's Page

Your House of Delegates, after much debate, voted unanimously to sustain the action of the Council to accept the full amount of money from the Federal Government to purchase polio vaccine and forward it pro rata to each county health department on the basis of estimated number of children within the age limits.

This was done as a compromise—for none of us felt we should accept vaccine free for non-indigents. And yet this was what the law ordered. We felt the public would be very critical if we held up the vaccination program over this point, which to them was relatively unimportant—no matter how much we thought it was.

But we did promise the medical profession we would go from the assembly hall and let Congress know we did not wish to be put in such a position again—that we welcomed free vaccine for all indigents—and for them only. We promised that, and this page today is to carry out that promise.

May I ask each of you readers and physicians, when you put this magazine down, to write forthwith to both your Senators and your Representative in Congress, asking them in the future to make no appropriations to buy something with TAX MONEY that the individual who is to be the beneficiary, is able to pay for himself.

Please MAKE THIS POINT CLEAR AND DO IT YOURSELF TODAY. If you do not then we will not have the influence with our Congressmen and Senators for the many, many things that are going to be constantly coming for our attention—many of them which we must defeat to keep our professional liberty. You can blame yourself, if you do not help.

Grant Gaither

PRESIDENT

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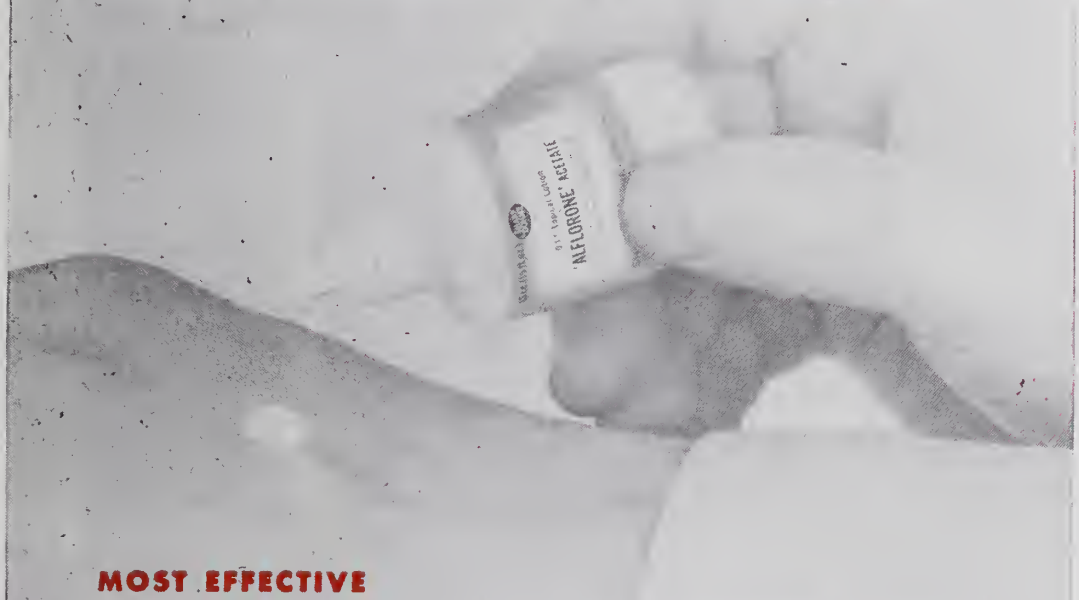

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Q. In what way are ACHROMYCIN Capsules advantageous?

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A. It is produced — every gram — under rigid quality control in Lederle's own laboratories and is available only under the Lederle label.

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*REG. U.S. PAT. OFF.

DIFFERENTIAL DIAGNOSIS, THE INTERPRETATION OF CLINICAL EVIDENCE: by A. McGehee, Harvey, M.D., and James Bordley III, M.D.: W. B. Saunders Co. 665 pages; June 1955; $11.00.

This is a new book which in a different and better manner attempts to teach the reader differential diagnosis. The book attempts to provide a method of approach to the diagnosis of disease by use of the clinical-pathological conference. As the authors point out it is not a textbook and assumes that the reader has already acquired the basic information contained in a variety of medical textbooks.

Most reference books present a subject and in logical sequence but stripped of the complexities which usually are confusing in interpretation. This volume, in the consideration of each specific diagnostic problem, reverses the usual process by beginning with the complex and working towards the simple. It simulates the conditions under which the physician must actually work.

The author states "our purpose is to present this subject (differential diagnosis) as a systematized discipline." Each chapter of discussion is followed by a condensed version of abstracts of actual clinical-pathological conference cases to illustrate the various diagnostic principles presented.

The following are discussed and presented plus CPC cases as well: aortic insufficiency, heart failure, pain in the chest, sudden death, failure of urinary excretion, hematemesis and melena, jaundice, hepatomegaly and ascites, lymphadenopathy and splenomegaly, fever of obscure origin, diseases involving the lungs or mediastinum, meningitis. In addition there is a chapter on special diagnostic problems including the diagnosis of certain rare diseases.

Of special value is the final chapter which presents eleven unknown cases for the reader to analyze. This is followed then with a discussion of these cases which the reader may use after analyzing the cases for himself to see if he gained any benefit from the book. There is a table of laboratory values of clinical importance in the adult as well as a special index of symptoms, signs, and laboratory findings. Thirty tables of various signs and symptoms are presented which aid in diagnosis.

This book will be of great value and will act as a constant "refresher course" for all senior medical students, general practitioners and internists who wish to keep improving their diagnostic ability. If used as directed it will aid in "providing a methed of approach to the diagnosis of disease."

Carl W. Kumpe, M.D.

INFORMATION ON THE CARE OF YOUR SKIN: by Herbert Lawrence, M.D., 95 pages; $2.50; published by Little, Brown and Co.

In recent years much medical writing has been produced primarily for the enlightenment of a non-medical audience, and Dr. Herbert Lawrence's book on "The Care of Your Skin" is another example of this type of work.

Acne Vulgaris is an ancient and universal affliction of the skin. It occurs generally in that period of life when the physical and psychic impact of such a disfiguring disease is particularly unfortunate, and for that reason much has been written regarding its prevention and cure.

A considerable segment of what the public knows about the cause and cure of Acne is based on myth, superstition, and folk lore. Dr. Lawrence, in clear, non-technical language attempts to separate fact from fable and instruct the individual as to how Acne can best be treated in the light of modern dermatological knowledge.

He outlines in the clearest possible terms the many intermeshed factors that play some part in the causation of the disease, and he describes the various methods by which they may be combatted.

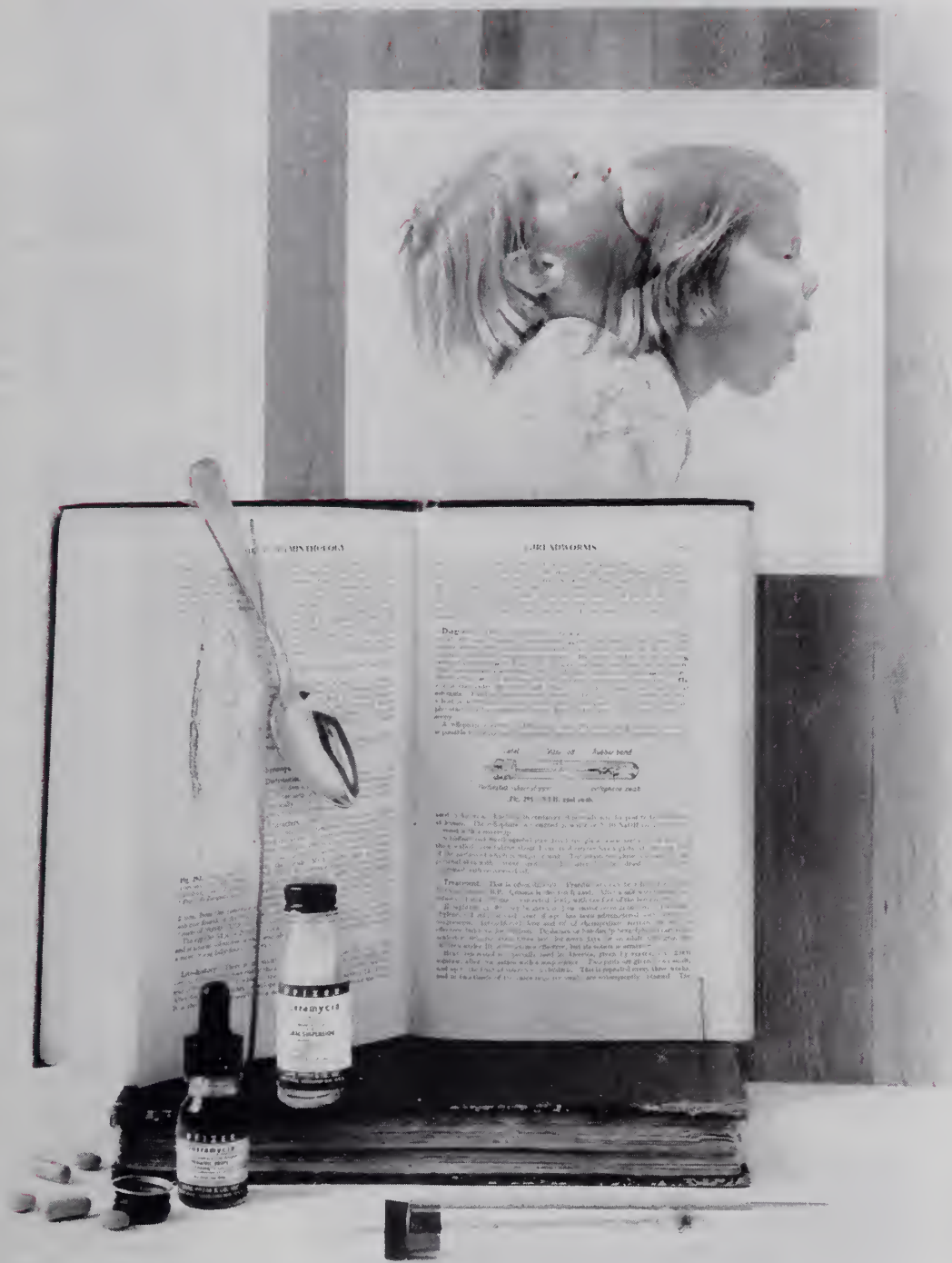
This information includes what is considered a proper diet, the principles of correct personal hygiene, the use of vitamins, hormones, topical medication, physical modalities, and finally psychotherapy.

My only criticism of this book lies in his advise to patients regarding the self-removal of their own comedos or blackheads. In theory this may be all right, but in general, dermatologists frown upon the practice of self-medication of any skin disorder, and especially in the case of comedo removal because of the definite probability of resultant scaring or secondary infection.

However, his book is practical, well thought out, and easily understood. It deserves a place

(Continued on page 938)

From virus to vermicularis



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IN THE BOOKS

(Continued from page 936)

in the library of every family whose children have reached, or are about to reach, this period in their development.

Winston Rutledge, M.D.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION Edited by Richard M. Hewitt, B.A., M.A., M.D.; A. B. Nevling, M.D.; John R. Miner, B.A., Sc.D.; James R. Eckman, A.B., M.A., Ph.D.; M. Katherine Smith, B.A.; Carl M. Gambill, A.B., M.D., M.P.H.; Florence Schmidt, B.S.E.; and George G. Stilwell, A.B., M.D. Volume XLVI, 1954. Published June, 1955 by W. B. Saunders Company 843 pages; $12.50.

As evidenced by the firty-five previous volumes, this book has become well established. The editors state that its contents have been selected with the interests of the general surgeon, general practitioner, and diagnostician in mind. It also contains material representative of the specialist and the basic sciences in order to present adequately the work of the Mayo Clinic. The volume undoubtedly fulfills the stated objective.

Due to the nature of Mayo Clinic practice, reports of unusual and chronic diseases appear in larger numbers than any single general surgeon or diagnostician would encounter. For this reason the statistical data on results of various methods or treatment are invaluable. The solo practitioner and small groups, distant from the teaching centers, should find this data invaluable in judging proper treatment, surgical procedures, or disposition by referral for the relatively fewer cases they may see.

Inclusion of the specialties is not only wise from the clinical standpoint, but it is beneficial to the general surgeon or diagnostician who reads in order to keep abreast of happenings outside his own particular field in interest.

One article in particular stands out in being applicable to all practitioners of the healing arts. "The Difficult Patient" by Howard P. Rome, will be well worth the time consumed in reading and should be beneficial to those of us who have public relations problems.

This volume is recommended for the hospital library or the doctors lounge. Due to the multiplicity of subjects, one would hardly read through the book, but it is adaptable to short periods of interrupted reading. One hesitates to recommend the purchase of this book to the individual doctor who has time to read very little. Out of 134 articles 72 appear by abridgement or abstract.

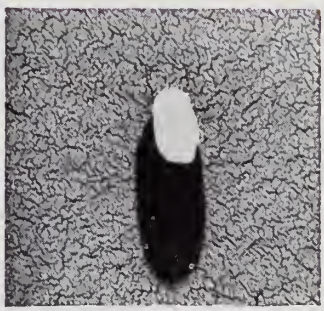
Lewis Dickinson, M.D.

The organisms commonly involved in

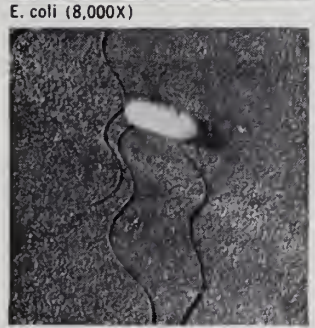
Pyelitis

E. coli (8,000X)

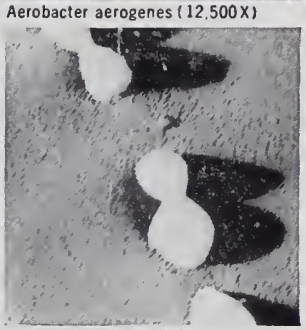
Aerobacter aerogenes (12,500X)



Salmonella paratyphi A (8,000X)

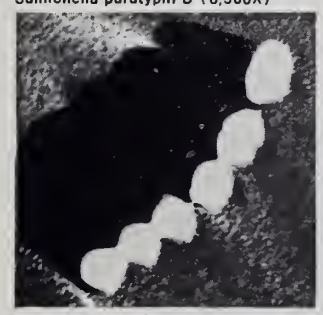


Salmonella paratyphi B (6,500X)



Strep. pyogenes (8,500X)

Strep. faecalis (10,000X)



Strep. viridans (9,000X)

Staph. aureus (9,000X)

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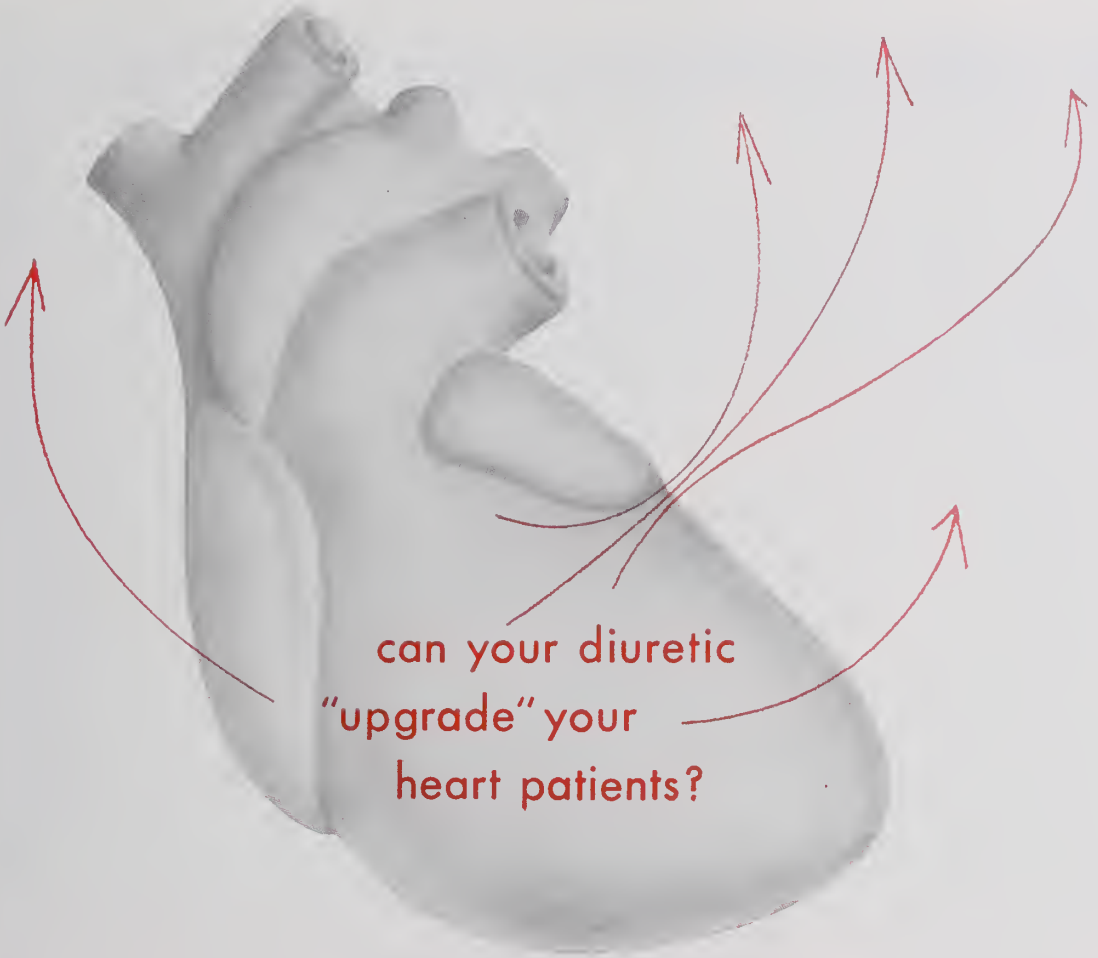

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*Leff, W., and Nussbaum, H. E.: J. M. Soc. New Jersey 50:149, 1953.

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WASHINGTON NEWS DIGEST

Washington, D. C.—Within a few months there will be under way the first comprehensive survey ever to be made of the nation's mental health problems. The study will attempt to measure the extent of mental illness, to judge the progress and lack of progress in research, and to estimate the additional hospitals and clinics and trained personnel needed before a start can be made toward a solution.

A newly-formed Joint Commission on Mental Illness and Health already has begun preliminary work on the survey. The all-out effort will be initiated--possibly before the first of the year--after the Commission has received the formal approval of the National Mental Health Advisory Council of U. S. Public Health Service and the Surgeon General. Once this endorsement has been given, $250,000 in U. S. funds will be available to help with the first year's operations. Another million dollars is to be supplied over the following two years.

Originally, the Joint Commission was formed by the American Medical Association's; Council on Mental Health and the American Pyschiatric Association. Later other associations joined in, including the American Association of Psychiatric Social Workers, the American Hospital Association, the American Nurses Association, the National League of Nursing, the American Psychological Association and the National Education Association.

A nationwide survey has been the objective of these associations for more than a year. Substance was added to the idea this year when Congress approved the $1,250,000 fund, to be used over three years, for a comprehensive study. The law specifies that the investigation be conducted by non-governmental bodies; to fully qualify, the Joint Commission has been legally incorporated.

At hearings before Congressional committees early this year psychiatrists and others outlined the complex problem they are facing.

The care of mental patients is one of the great financial burdens of the states; rate of cure and rehabilitation is so low that institutions are being filled as fast as they can be constructed; half the hospital beds are occupied by mental patients and their care costs more than a billion dollars a year in tax funds.

There are not enough psychiatrists trained to administer state programs or even all the large hospitals; competition for the top men in this field has been compared to the proselyting of football players and coaches.

Many of the leading psychiatrists complain that too much attention is being paid to constructing hospitals and not enough to research, which might develop treatments that would keep many of the patients out of institutions, and bring about the rehabilitation of hundreds of thousands of others now hospitalized.

In testifying before a House committee early this year, Dr. Leo H. Bartemeier, representing the AMA, argued for federal help in conducting the survey. He told the Committee: "For several years we in the profession of psychiatry have been aware of the critical need for a survey and evaluation of our facilities and programs for the diagnosis, treatment and care of the mentally ill and retarded. While the problems of mental illness appear to grow in almost geometric proportion, we find ourselves without a comprehensive, up-to-date, integrated body of knowledge in spite of the fact that many worthwhile surveys and studies in this field have been made. It is only with such complete knowledge that our present and future direction and programs can be properly planned."

NOTES:

Before it prepares a report on the narcotic problem, the Senate subcommittee will have held hearings in most parts of the country. Many local addiction problems have been described. At the New York hearing, the subcommittee was urged to recommend a system of clinics, where the addict legally could obtain narcotics at reasonable cost, thereby defeating the rackets.

Although states either may take U. S. grants to buy Salk vaccine or the vaccine itself, most of them are taking the money.

Veterans Administration has set up a seventh area medical office in Columbus, Ohio, a move that it believes eventually will provide better service at less cost.

Almost nine million dollars will be spent next year on health work in North, South and Central America by international bodies, such as World Health Organization. One project is the starting in Mexico of a four-year malaria eradication program.

The Navy has set up a program for training Waves as nurses; they will be obligated for a year's active duty for each year of training.

Bureau of Internal Revenue has summarized deductible and non-deductible medical expenses for income tax purposes; the listings combine new interpretations with a clarification of old rulings.

KNOX Protein Previews

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Optimal dosage proved to be one envelope (7 grams) of Knox Gelatine administered daily for three months. Improvement, however, was noted after the first month. If you would like more complete details of this work, just use the coupon.

1. Rosenberg, S. and Oster, K. A., "Gelatine in the Treatment of Brittle Nails," *Conn. State Med. J.* 19:171-179, March 1955.
2. Tyson, T. L., *J. Invest. Dermat.* 14:323, May 1950.

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1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

with little risk of serious side effects

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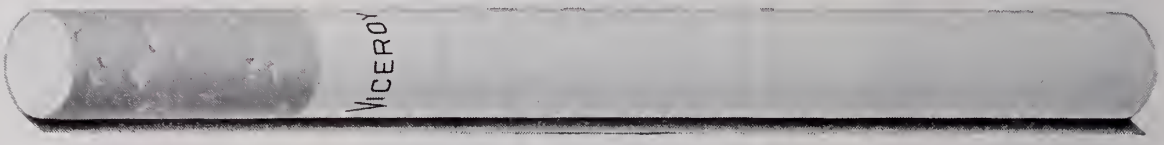

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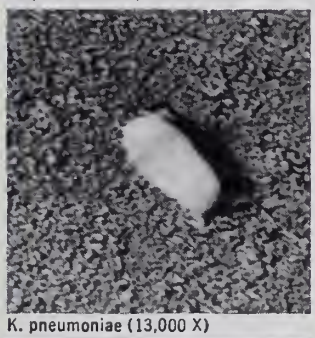
D. pneumoniae (10,000 X)



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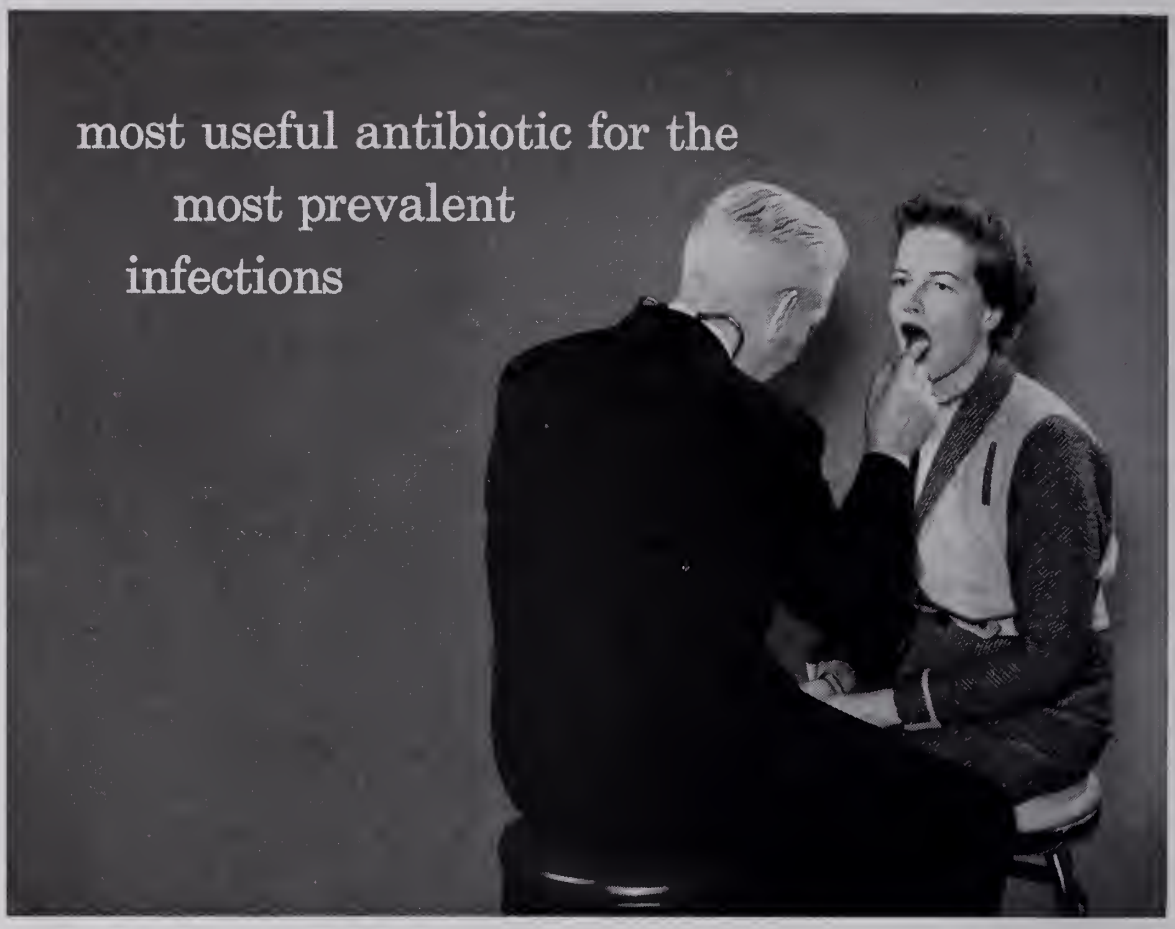

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The JOURNAL of the
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Issued Monthly Under the Direction of the Council

VOL. 53 NOVEMBER, 1955 NO. 11

Clinical Pain*
Its Mechanisms and Management

RUFUS C. ALLEY, M.D., F.A.C.S.**
Lexington

It is safe to state categorically that pain is the most important symptom in the entire field of clinical medicine. Pain in one form or another is the compelling influence involved in most doctor-patient contacts.

In this discussion the word "pain" is used in its broad sense to denote suffering from any cause whether it be physical injury or mental anguish, or any combination of physical and mental distress. With this broad concept it is easy to understand why pain, or fear of pain, is so important in the lives of so many people. For instance, the patient who comes for a routine periodic "check-up", even though he may be in perfect health, is motivated by the desire to preserve his health so as to avoid or to postpone illnesses which he fears. Fear is itself a form of pain. A French proverb says, "He who fears to suffer, suffers from fear." Benjamin Franklin said in a letter to John Hay, "You may judge that my disease is not very grievous since I am more afraid of the medicine than of the malady."

As a proctologist my primary interest in pain is, of course, its relationship to the lower bowel. The principles of pain mechanisms and methods of control, however, are basic and require only minor modifications to fit any region of the body or any type of injury or illness.

*Read before the Franklin County Medical Society, February 17, 1955.

**Chief, Departments of Proctology, St. Joseph and Good Samaritan Hospitals; Chairman Proctology Section, Central Baptist Hospital, Lexington, Kentucky.

Types of Pain

Physical pain is of two types. One is cutaneous or superficial pain which is described as of "bright" or "brilliant" quality; when of sufficient intensity it stimulates the primitive urge to fight or flight. The other type is deep or visceral pain which is quite different from the cutaneous type. Visceral pain is of a deep aching quality and induces depression and inactivity. It may be associated with nausea.

The Two Components Of Pain

The greatest contribution to the study and understanding of pain was made several years ago (about 1940) when it was discovered that pain is not a single sensation but consists of two separate components: (1) The Perception of Pain, and (2) The Reaction to Pain. Methods of measurement and evaluation of each of these components have been devised. The results have proved to be of great scientific interest and have materially modified our clinical approach to more effective control of pain.

The first component, pain perception, involves primitive and relatively simple nerve pathways; its threshold (minimum intensity required for perception) is nearly constant for different healthy human individuals and for the same individual under varying conditions. It is a physiologic mechanism and its patterns are practically constant.

Reaction to pain, however, is an entirely different matter; its threshold varies between wide limits for different indivi-

duals and even for the same individual at different times according to circumstances. This component of pain is psychogenic and is remarkably inconstant in its patterns. Reaction to pain is highly individual; it is the subjective and objective expression of what that particular pain under the existing circumstances means to that individual in the light of past experiences. Manifest mental anguish and displeasure may dominate and confuse the picture to such a degree that it is impossible to determine whether the patient is or is not actually experiencing physical pain.

Factors Influencing Medical And Surgical Pain

Reaction to pain is profoundly influenced by racial, family and environmental backgrounds, and by many other factors, particularly those related to childhood emotional experiences. This complex psychological picture reflects the personality traits of the individual and explains the highly individual responses to painful situations. It also explains why some individuals actually experience great physical and mental distress in a situation which would scarcely annoy a less sensitive, phlegmatic type of individual. Austin Riggs said, "There is no disease or disorder which does not in some degree affect the patient's emotional and mental life, nor is there any such condition which is not, in its turn, favorably or unfavorably affected by the patient's feelings and thoughts."

The extreme variability of personality factors involved in the patient's reaction to pain deserves careful attention. It is here that practice of the art of medicine plays a highly important role and may determine, in the mind of the patient at least, the difference between satisfactory and unsatisfactory doctor-patient relationship.

The Importance Of Pain And Its Proper Management

The physician is seriously concerned with the control of pain not only for humanitarian reasons. It is well known that persistent physical pain and/or emotional tension produce psychic trauma that is often an etiologic factor in organic disease. This is especially important in such diseases as peptic ulcer, chronic ulcerative colitis, arthritis, urticaria, coronary disease, hypertensive vascular disorders, and other disorders with psychosomatic components.

It is clearly the physician's responsibility to do everything within reason to protect his patient from the ravages of physical and mental distress. The discerning physician will have a sympathetic understanding of the patient as a human entity and will recognize that personal and family problems relating to an illness are almost always present. Proper correlation and evaluation of the entire situation are highly important factors in the successful management of any illness, whether medical or surgical.

Methods Of Pain Management

The successful management of a painful illness depends largely upon the physician's attitude, and his ability to recognize and understand that the patient is a human and has problems associated with his suffering. In other words, proper consideration must be given the two components of pain (perception and reaction). Control of the perception component with analgesic or anesthetic drugs is relatively easy. Management of the patient's reaction to pain, however, can be and often is a real problem which taxes the practitioner's skill and resourcefulness to the utmost. We occasionally hear a patient say, "When Dr. Blank walks into the room, I feel better." This is indeed high praise and usually indicates that "Dr. Blank" understands his patient's reaction to distress and knows what to do about it. This understanding and the confidence it stimulates is a potent factor in the successful treatment of any illness.

Of course the primary objective of any treatment is to correct, if possible, the underlying cause of the complaint. If the cause of a painful condition can be corrected promptly and expeditiously, it is possible that further treatment for pain may not be required. This, however, is not to be expected in the majority of injuries or illnesses of any consequence and, in many cases, treatment primarily for relief of pain may be highly desirable.

It should be remembered that in many instances localized pain, which is most frequently the result of infection or muscle spasm, can be relieved by simple local applications. The old fashioned poultice (a form of moist heat) and the mustard plaster (counter irritation) have therapeutic virtues often overlooked in this era of the "miracle drugs."

The administration of analgesic drugs is often necessary in the control of pain. Aspirin and other coal tar derivatives in

various combinations, with or without codeine, are highly useful in the control of physical discomfort or mild pain. Their analgesic effect may be augmented by the addition of a mild sedative such as one of the barbiturates. The use of morphine, or a comparable opiate, is essential in the management of many major illnesses, particularly those involving surgery or serious trauma. It should be remembered that morphine has two important physiologic effects: (1) It is a powerful analgesic, i. e., it elevates the threshold for perception of pain, and (2) it produces euphoria which elevates the threshold of reaction to pain. Another unusual property of morphine is that its maximum physiologic effect occurs in the absence of pain. In the presence of severe pain an average dose of morphine is almost useless. It seems that pain nullifies its analgesic effect and neutralizes its toxic effect. For instance, to relieve a patient with severe kidney colic will require a dose of morphine that would be dangerously toxic if given the same patient in the absence of pain. When morphine is used sensibly, though adequately, for the control of pain over relatively short periods of time, there is little likelihood of habit formation.

Importance Of The Physician Patient Relationship

We occasionally see a physician, usually a young one, who proclaims his interest in scientific medicine, but who cannot abide neurotic patients. Admittedly the psychiatrist is best qualified to care for patients with purely psychogenic disorders, but what about the large group of patients, within normal limits mentally, who have various psychosomatic disorders on the basis of nervous and emotional stress? It is plainly the duty of every practitioner of medicine to give these unfortunate patients the sympathetic and scientific attention they deserve. Almost every alert physician can recite instances of discovery of important organic disorders in neurotic patients. It is a great mistake to give even a confirmed neurotic the "brush-off". To do so not only denies him trained medical attention, but pushes him into the hands of the cultists for exploitation.

In conclusion it should be stated that in the conquest of pain and suffering the physician today has greater opportunity than ever before. More effective management of pain can be achieved by recognizing and understanding the underlying physical and psychic factors involved, and then applying appropriate corrective measures. The greatest possible contribution to human health and happiness, which includes relief of physical and mental distress, is the primary obligation and objective of the conscientious physician.

Psittacosis

The First Recorded Case of Psittacosis in the City of Louisville, Kentucky

JOHN M. KEANEY, JR., B.S., M.D.

Louisville

The following report of the first definitely diagnosed case of psittacosis in the City of Louisville, Ky., is of interest and importance, because of several reasons, which will be discussed in the comment following the case report.

The patient, a 50 year old white male, was referred by one of the Louisville General Hospital emergency room physicians.

History

When first seen in the office on 1-31-55, the patient was at the point of collapse. He was sweating profusely, and it was only with some difficulty that he could walk or stand alone. He complained of extreme weakness, a dry irritating cough, headache, loss of appetite, vomiting, fever and chills. Obviously in need of hospitalization, arrangements were made to have the patient admitted to a private hospital, without further taxing him with an office examination and history.

At the hospital it was learned that the illness had begun very suddenly, 2 days previously on 1-29-55, with the above symptoms, except for the extreme weakness and prostration. The patient's wife had taken him to Louisville General Hospital emergency room where intramuscular penicillin was given and an X-ray of his lungs was made. It was later learned that this X-ray revealed only a "slight stringy infiltrate in the base of the left lung, repre-

senting a bronchopneumonia."

Two days later, on 1-31-55, the patient was much worse, again visited the L. G. H. emergency room and this time was referred to his own family physician.

In addition to the above history it was known that this man raised and sold parakeets. This was known because of previous visits to the patient's home, to treat his wife for unrelated illnesses. He usually kept approximately 25 birds, and frequently slept in the room where the birds were kept in cages. There was no other significant history.

Examination

Examination revealed a 50 year old, well developed, white male, appearing acutely ill. He had a temperature of 104 degrees, a pulse rate of 80, a respiratory rate of 28, and a blood pressure of 130/76. There was a slight dullness to percussion at the left lung base, and a few crepitations. The patient was dehydrated. There was no other significant physical finding. The following laboratory findings were obtained; erythrocytes 4,474,000; hemoglobin 12.7 Gm., 88%; leucocytes 17,100; neutrophils 89; segs., 79; nonsegs 10; lymphocytes 5; monocytes 4; eosinophils 1, basophils 1. Urine was negative except for 2 plus albumin, 2 pus cells and 2 hyaline casts per h. p. f. The chest x-ray report read as follows: "There is a rounded area of increased density extending into the left lung from the root area. Slight haziness is noted in the base of the left lung and slight emphysema in the upper lobe. The left hemidiaphragm is slightly elevated. The dense mass observed in the left root zone is suggestive of bronchogenic neoplasm. Bronchoscopy is recommended."

Before receiving the above X-ray, blood and urine reports, the following laboratory tests had been ordered; typhoid, paratyphoid, histoplasmosis, brucellosis, blood culture and psittacosis. Chloromycetin was ordered to be started immediately upon completion of the collection of sufficient material for the above tests.

When the X-ray report suggesting bronchogenic neoplasm, and recommending bronchoscopy had been received and the film seen, consultation with a thoracic surgeon was sought. The patient was bronchoscoped with no significant findings for neoplasm. The X-ray, however, appeared so typical for neoplasm, that the patient was scheduled for chest surgery, to be performed when his condition improved to such extent that he could safely undergo an operation.

Course

The patient's recovery was speedy and dramatic. In three days, while receiving 500 mg. Chloromycetin every 6 hours, the temperature became normal, leucocyte count was 9300, neutrophils 58, and he felt well. An X-ray report on 2-5-55, four days after the X-ray that appeared so typical for neoplasm, stated, "comparison with film made on 2-1-55, shows a definite recession in both the size and density of the previously described mass in the area of the left root zone. These changes would tend to suggest that this mass is inflammatory in nature." Surgery was avoided.

Chloromycetin was continued for a total of four days. Recovery progressed uneventfully and the patient was discharged from the hospital after 6 days. Four months later he had still had no further symptoms.

All of the laboratory tests proved negative with the exception of the complement fixation test for psittacosis. The result of this test was received about 4 weeks after forwarding the patient's blood to the U.S. Public Health Laboratory, Virus and Rickettsia Section, Montgomery, Alabama, and was considered positive for infection by a member of the psittacosis—lymphogranuloma venereum (L. G. V.) group of viruses. Since the patient's infection was considered to be psittacosis, and since the complement fixation test does not distinguish between the different viruses of this group, extra precautions had been taken to rule out, in this patient, infection with lymphogranuloma venereum, inclusion blenorrhea, and trachoma.

On 2-17-55, another serum specimen of this patient's blood was sent to the Public Health Laboratory at Montgomery, Alabama for a repeat test with the result that the complement fixation test was more strongly positive than the original. On 5-15-55, a third blood specimen was examined with a result too weakly positive to be considered significant for a diagnosis of infection with the psittacosis L. G. V. virus.

Comment

Psittacosis is not a rare disease and is not difficult to diagnose. It is rather startling to note that in Louisville, Ky., with a population of approximately 404,000, the first case of psittacosis was not recorded until this year (1955). This becomes even more striking when we realize that during 1952

five cases were discovered, and during the first 6 months of 1953 thirty-seven cases were found in JoDaviess County, Illinois, with a population approximating 31,000[1]. This was due to the fact that physicians became alerted to the possibility of other cases in the community after the first case was recorded there in 1951.

We are all aware of the comparatively recent growth in popularity of parakeets as household pets. In 1944 six cases of psittacosis were reported in the U. S. while in the first half of 1954, three hundred and three (303)[2] were reported. The disease incidence is steadily increasing and it is probably overlooked because of the unawareness of the medical profession. So far as is known there are no laws in the State of Kentucky governing the breeding, sale, or offer of sale of the psittacine family.

Etiology and Transmission

Since Ritter first described the disease under the name of pneumotyphus in 1880, psittacosis has been reported as endemic or epidemic in many parts of the world, Nocard in 1893 thought he found the causative agent, a bacillus, but Bedson in 1930 and others have shown that it belongs in the virus group of diseases. The infective agent is a filterable virus which has been isolated from infected birds and human beings. In birds the virus is present in nasal secretions, feces, blood, liver and spleen, while in man it is present in saliva and lung tissue.

It is generally thought that psittacosis cannot be transmitted from one human being to another, and that man contracts the disease only from infected birds. It has been shown however, that infection from man to man does occur, probably as the result of contact with the saliva of an infected person[3]. An infected person may become a carrier and there is one case on record of a person having the virus in the sputum 8 years after a severe infection with psittacosis[4].

Individuals recovering from an attack of psittacosis are believed to be resistant to re-infection but second attacks do occur.

Nosology

It would probably be of interest to clarify at this point the two terms, psittacosis and ornithosis. They are frequently used synonymously and interchangeably, and in fact the term ornithosis is frequently now substituted for the term psittacosis.

Strictly speaking however, we should reserve the term psittacosis for the disease transmitted to man by the psittacine birds, with the characteristic beak, such as the parakeet and parrot, while the term ornithosis should be used for the disease transmitted by other orders of the class Aves such as the chicken, pigeon, duck, etc. It is not necessary that great attention be given this minor detail. One may feel quite secure in using either term at the present time. The layman is usually cognizant of the existence of the disease, under the term parrot fever, but the number of persons averse to harboring parakeets or parrots as pets in their homes because of the possibility of contracting psittacosis is exceedingly small. It would probably be of great benefit if the public were made aware of the danger involved in handling birds of the psittacine family.

Most of the available literature on psittacosis shows that several of the broad spectrum antibiotics are listed as the present treatment of choice for this disease; some of the authors preferring oxytetracycline, (Terramycin) others favoring chlortetracyline (Aureomycin) and many using and finding good results with penicillin. In only an isolated instance here and there, is the drug Chloromycetin mentioned as effecting a cure.

In view of the results obtained in the present case with Chloromycetin, and the failure of penicillin to favorably affect the disease, we must conclude that the former drug should receive preference over penicillin.

It would also be reasonable to assume that Chloromycetin should have preference over the other broad spectrum antibiotics, because of the dramatic way in which the patient responded. It would be difficult to conceive of any other drug having a more rapid, or more complete effect.

While it is not within the scope of this paper to suggest methods of control for the sale, breeding and advertising of psittacine birds, it is suggested that some regulations be made by public health authorities.

That this first recorded case of psittacosis in Louisville was the first to occur in this city is difficult to believe. That many other cases have occurred, and that there are probably human carriers at the present time is most likely.

Much more work is necessary in the field of psittacosis. This present report would be considered well worth the effort should it be instrumental in alerting the profession to the existence of the disease,

in probably a much higher incidence than is generally believed.

Another point of interest brought out by the foregoing case is that an occasional visit to the homes of patients sometimes reveals valuable information which would otherwise remain unknown. It is doubtful that this case of psittacosis would ever have been diagnosed as such, had not the parakeets been observed when the patient's home was visited. The patient surely would not have volunteered the information that he kept the birds in his home, because of his unawareness of the relationship between parakeets and his illness. It is also unlikely that he would have been questioned specifically, concerning any contact with parakeets or parrots.

Summary

The first recorded case of psittacosis in Louisville, Ky., has been presented. The incidence of this disease is rapidly increasing, and it would be well to have regulations of some kind governing the sale, breeding, advertising etc., of psittacine birds.

Psittacosis responds to treatment by the broad spectrum antibiotics, and it is believed that Choromycetin particularly is most useful.

The medical profession, especially those in general practice, should assume that psittacosis is much more prevalent than has previously been reported in this community and consider it in their differential diagnosis of disease having the symptomatology of virus pneumonia. It is a simple procedure to draw a few cubic centimeters of blood and mail to the laboratory.

Lastly, let it be remembered that a visit to a patient's home might supply an otherwise unsuspected clue to the diagnosis of his disease.

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Cholecystographic Demonstration of Rokitansky-Aschoff Sinuses of the Gallbladder

HAROLD D. ROSENBAUM, M.D.

Lexington

Rokitansky-Aschoff sinuses are hernialike outpouchings of the mucosa of the gallbladder through the underlying submucosal and muscular tissues. At times the outpouchings reach the serosa. The sinuses probably do not occur, at least to a significant degree, in a perfectly normal organ. The wall of the gallbladder, however, contains no muscularis mucosa and is otherwise so formed as to become sufficently weakened following an inflammatory process as to permit herniation of the mucosa through its interstitial tissues. It generally has been felt that chronic distention, as well as weakness of the gallbladder wall, is a factor in the formation of these sinuses. To be seen at cholecystography these pathological changes must be marked.

Fourteen cases (1-12) of Rokitansky-Aschoff sinuses visualized at cholecystography have been reported. It is felt that a brief report of an additional case is justified since the presence of these sinuses is a definite indication of gallbladder pathology.

Case Report

JWS, 29 years old, white, mother of one, was admitted to the Ephraim McDowell Memorial Hospital, Danville, Kentucky, on February 27, 1955, complaining of intermittent gaseous eructation and soreness in the right upper quadrant for the preceding two years. The past history was not significant except for a mild anemia of undetermined type for 13 years. During the three months prior to admission the symptoms became decidedly worse with occasional vomiting and significant general malaise. There was no fatty food intolerance.

The only abnormal finding on physical examination was moderate tenderness in the right upper quadrant. Laboratory studies were not remarkable. The hemoglobin was 83%, and the red blood count was 4,410,000.

Cholecystograms (Telepaque) showed a dense gallbladder shadow (Fig. 1) containing no calculi. There was a Phrygian cap near the tip of the gallbladder. The entire gallbladder shadow, including the area proximal to the Phrygian cap, was encircled by an interrupted ring of opaque medium. Films following a fatty meal (Fig. 2) revealed almost complete emptying of the gallbladder. There was little change, except for contraction, in the ring of opaque material. These findings were interpreted as visualization of Rokitansky-Aschoff sinuses and as indicating gallbladder pathology.

No stones were found at operation (B. Earl Caywood, M.D., Danville, Kentucky), and no abnormality was noted in the common duct. The removed gallbladder did not appear grossly abnormal except for some thickening of its wall. The pathological examination (Samuel C. Capps, M.D., Lexington, Kentucky,) revealed a spongy, thickened gallbladder wall measuring 5 mm. On section the wall contained many tiny pockets in some of which was soft black sludge. Microscopic studies showed chronic inflammation in the wall. Rokitansky- Aschoff sinuses were prominent (Fig. 3), and some of the sinuses contained tiny fragmented calculi.

The patient has been entirely free of symptoms since the operation.

Fig. 1. Note interrupted rim of opaque medium completely surrounding the gallbladder lumen.

Fig. 2. Film following a fatty meal. The gallbladder is almost empty, but the rim of opaque medium is essentially unchanged.

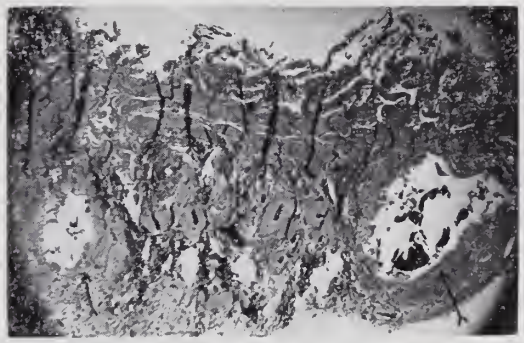

Fig. 3. Photomicrograph (X30) showing two Rokitansky-Aschoff sinuses (arrows), each containing tiny, fragmented calculi.

Discussion

An historical review and pathological details are beyond the scope of this report. These aspects of the condition are amply covered elsewhere (13, 14). It is of interest that Rokitansky-Aschoff sinuses are frequently seen at pathological examination. The rarity of such a finding at cholecystography is probably due to a diseased gallbladder being unable to concentrate the opaque medium sufficiently, the small size of many of the herniations, and the inability of the opaque medium to displace the normal contents of the sinuses. In fact, the necks of the sinuses frequently become occluded. It is likely that more Rokitansky-

Aschoff sinuses will be seen in the future with use of agents for cholecystography that give the gallbladder deeper contrast than has been possible in the past.

The x-ray findings are striking and easily identified. All reported cases have shown collections of opaque medium in the pockets formed by the herniations of the mucosa through the gallbladder wall. These outpouchings are usually numerous, forming an interrupted opaque border just outside the gallbladder lumen. Occasionally the sinuses are visualized only after the fatty meal. About one-third of the gallbladders have contained stones. Approximately half of the cases have shown a significant constriction of the gallbladder lumen. When a constriction is present the sinuses usually are only seen distal to the narrowed area. This indicates that chronic distention is a factor in the pathogenesis of this pathological state. In the absence of a stricture, chronic distention could be caused by spasm somewhere along the ducts draining the gallbladder. The pathological report in all proved cases has indicated the presence of chronic cholecystitis.

Summary

1. A case is reported in which Rokitansky-Aschoff sinuses of the gallbladder were demonstrated by cholecystography.

2. The roentgenographic picture is pathognomic and is characterized by pockets of opaque medium that lie immediately outside, and more-or-less surround, the gallbladder lumen. Constrictions of the gallbladder are a frequently associated finding.

3. In all cases reported to date the cholecystographic demonstration of Rokitansky-Aschoff sinuses has been a reliable indication of significant gallbladder disease.

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Residual Cystic Ducts, A Factor in the Post-Cholecystectomy Syndrome, Now Visualized By A New Contrast Media, With Cases

ALLEN E. GRIMES, M.D., F.A.C.S.

HAROLD REDD, M.D.

Lexington

The distress attributed to the post-cholecystectomy syndrome, whether it occurs months or years after biliary surgery, may be a matter of great concern to the patient and its successful treatment a problem of considerable complexity for the physician. When the most common causes of this syndrome, namely, pancreatitis, cholangitis, hepatitis, common duct stone and stricture, are excluded from the diagnosis, there remains a small unclassified group of patients. Residual cystic ducts with or without stones and small remnants of the gallbladder have been found on abdominal exploration in some of the cases of this latter group. Surgical removal of the diseased part, when followed by relief of the symptoms, offers adequate evidence in favor of including residual cystic stumps as a factor in producing the post-cholecystectomy syndrome. In the past, however, this diagnosis could not be made with great accuracy. In 1948, when one of us, A.E.G.[6], reviewed this problem and reported two cases of residual stones in the cystic duct, the clinical diagnosis was made more by exclusion and on suspicion. At present there is available a new intravenous dye, Cholografin (Squibb), which provides clear visualization of the biliary

duct system in a high percentage of the cases. This new technique recently made possible the finding of a symptomatic, residual, long cystic duct. The surgical removal of the diseased duct gave prompt and lasting relief.

Need For New Technique

This experience and the preliminary reports of Bell[1], et al, Orloff[10], et al, and Glenn[5], indicate the value of this new diagnostic test. The concentration of iodine contrast media, previously used for visualization of the intra and extra hepatic biliary ducts has been insufficient to show a common duct stone except in the occasional case. In fact, Walters[11], related that in the 33 years he has been studying patients with complicated lesions of the biliary tract, he has seen less than 10 patients in whom a common duct stone was found on roentgenographic examination with or without cholecystographic media having been administered. As recently as February, 1954, Waugh, Johnston and Cain[12] reported on the inaccuracy of the diagnosis of common duct stone with the present methods of investigation. Their series consisted of 175 cases of common duct stone operated upon by Waugh [12], of which 79% had biliary colic, 75% had associated nausea and vomiting, 50% of the patients were free from chills or fever or both and 35% gave no history of jaundice. This unusually large series of 175 cases with an error in diagnosis of approximately 20%, with the available methods of study, surely indicates the need for more accurate tests and techniques.

Cystic Duct Stones

Stones in the cystic duct following cholecystectomy, another cause for persistence of symptoms following cholecystectomy, are infrequent if one is to rely on the meager reports in the literature. Their presence is rarely suspected, the symptoms are unusual, and if jaundice is present, stones in the common duct is the diagnosis most likely to be made.

The origin of such stones will probably always remain a controversial point. There seems no logical way of determining whether they are residual in the duct, having been overlooked at the time of operation, or whether they have developed subsequent to the removal of the gallbladder. Anomalies of the duct system may go undetected, or an altered anatomic relationship due to pathological conditions may prevent satisfactory exploration of the structures. The cystic duct has been found unusually long in some cases with a low insertion into the common duct. It is conceivable that an elongated cystic duct may appear normal, although it contains an unsuspected stone which may inadvertently be allowed to remain. The edema and induration associated with acute cholecystitis often obscures the ducts and vessels, and in an effort to avoid the pitfall of common duct injury, an excessively long cystic stump may be left. Clute[4] reports 3 clinical cases of cystic duct stone after cholecystectomy and expresses the opinion that the cystic duct may well be the place for retention of stones if not actually the point of their formation. Beye[3], in 1936, reported 14 instances in which long residual cystic ducts had become so dilated as to resemble reformed gallbladders. They produced such serious disturbance as to necessitate secondary operations. He thought that long cystic duct stumps were subject to hydrostatic pressure from the common duct and were likely to become dilated. The distended ducts resembled small gallbladders but did not contain the mucosal or muscular components of the gallbladder. Hicken reported a series of 7 clinical cases with persistent recurring symptoms attributed to stones or pathology in the cystic duct. He thought that continued gallbladder distress is due to incorrect pre-operative diagnosis, to residual hepatic disease or to incomplete surgery. He advocated, therefore, the removal of the gallbladder and cystic duct at operation. I might suggest an alternate maneuver in cases of acute or subacute cholecystitis when marked edema and induration surround the biliary ducts. In such instances, to avoid injury to the ducts, it might be justifiable to leave a longer cystic duct, and then milk the cystic duct toward the gallbladder to evacuate any stones, or explore the open end of the remaining stump. Attention to this small detail has been most rewarding.

There seems to be general agreement with the statement that the nature and degree of the pathological changes in a diseased gallbladder are often out of proportion to the symptoms. We frequently disclose unrecognized gallstone by roentgenology in patients with few or no complaints, feel them with an exploring hand at the time of other abdominal surgical procedure and are surprised at definitive operations to find a subacute or acutely inflamed gallbladder in a patient without history of recent colic. We may be equally

distressed or disappointed to find a relatively normal viscus in one who has had severe colics. These experiences also emphasize the fact that the exact pathologic picture cannot always be accurately evaluated before operation by our present methods of study, including the valuable information afforded by the established cholecystographic technique.

Until recently the radiographic contrast media available would not concentrate sufficiently to visualize residual cystic ducts in the absence of the gallbladder.

The symptoms from cystic duct disease are likely to be bizarre and of such long standing as to prompt one to consider a functional disorder, or when clouded by drug addiction, as in one of our cases, to make one reluctant about surgical exploration.

As a rule, the treatment of the post-cholecystectomy syndrome, when recurring cholangitis, chronic pancreatitis, and common duct stone or stricture have been excluded, follows one of two courses. The conservative management consists of various restrictions in diet and the antispasmodic drug in vogue. The direct approach has been surgical exploration including sympathectomy, spincterotomy and common duct exploration. Unfortunately, some of these patients will remain unrelieved by the additional surgery if the surgeon is unfamiliar with residual cystic duct disease and does not extend his exploration to this area.

Non-Surgical Visualization

For the first time a non-surgical visualization of the biliary ducts with an intravenous contrast medium is available. Cholografin (Squibb) iodiparmide, within 40 minutes after injection will reveal the intra and extra hepatic ducts in cholecystectomized patients. Frank Glenn[5], in the Annals of Surgery for October, 1954, reported his experience with this new dye. The common duct was demonstrated in 53 patients or 66.2% of his series of 80 cases. The ducts were not visualized in patients with jaundice and in only 4 out of 8 with liver damage as indicated by other laboratory tests. Its use is contra-indicated in individuals with hyperthyroidism and those known to have an idiosyncracy to iodine. In fact, the manufacturer and other investigators advise testing the patient for sensitivity to the contrast medium by the accepted dermal and conjunctival tests. Bell[1], et al, believe from their "preliminary studies that some of the problems relating to biliary tract disease which have perplexed us until now will slowly be resolved, particularly the 'post-cholecystectomy syndrome' ". Orloff[10], et al, concluded from their experiences with Cholografin that calculi in the common duct and dilated cystic duct stumps could be demonstrated with satisfactory effect.

The report of the following 3 cases is done with the purpose of emphasizing the part diseased residual cystic ducts may play in the post-cholecystectomy syndrome and to call attention to a valuable new intravenous halogenated contrast medium for visualizing the intra and extra hepatic ducts and thereby more accurately establishing the diagnosis.

Cases

Case 1. The first case was a 69 year old female who had had symptoms persisting for 19 years after a cholecystectomy. The one complaint was a dull pain, occurring almost daily, localized to the upper right quadrant. In the absence of dyspepsia, jaundice, nausea, vomiting or bowel irregularity, I would have favored a functional disorder but for the chance finding on an x-ray of the kidney area of a suspicious, small, opaque shadow in the upper right quadrant. A complete gastro-intestinal x-ray series was made. The stomach and colon were normal. The gallbladder was reported as nonfunctioning, as would be expected if the gallbladder had been removed. When a stone in the kidney was ruled out by intravenous urogram, and in the absence of jaundice, I was encouraged to explore for a stone in the cystic duct.

The abdomen was opened through an upper right rectus incision by excising the old scar. The duodenum and hepatic flexure of the colon were adherent to the under surface of the liver, but a line of cleavage was found and the common duct readily exposed. It appeared and felt normal and was only slightly, if at all, enlarged. The cystic duct stump, however, was approximately 1 cm. in diameter and 2 cm. long, and felt as if it contained a stone. It was opened and found to be literally packed with small stones. The stones were evacuated and the duct removed. The common duct was next explored and found unobstructed. The patient had an uneventful recovery and has had no recurrences of her pains for the 12 years since her operation.

Case 2. The second case was more confusing since the patient had become somewhat addicted to morphine. She was a 47 year old white woman, who entered

the hospital on December 5, 1942. Her past history showed that in 1926, at one operation, she had had both tubes, one ovary, the appendix and the gallbladder with 3 stones removed for a 9 year complaint of recurring colic with jaundice. The patient was relieved of pain and restored to good health for 5 years. Then in 1931, she had recurrent attacks of severe cramping pain in the epigastrium which radiated to the back. In the months of June and July the colic had been almost continuous. Thereafter it had occurred at intervals of 2 weeks or less, and had lasted a few hours to 3 days. Except for occasional bloating there had been no associated dyspepsia such as heartburn or sour stomach. In fact, her appetite had been exceptionally good, as attested by a weight of 240 pounds the previous spring, since reduced to 180 pounds the preceding 5 months by diet and illness. There had been no jaundice, chills or fever accompanying the attacks. She had been chronically constipated, but the stools were normal.

The past history revealed that in addition she had had a thyroidectomy in 1938 for an "inward goiter." She also related that 2 or 3 years prior to admission she had passed gross clotted blood in the urine after an attack of abdominal pain. Subsequently, or 18 months previously, she had had spells of bladder trouble characterized by straining, frequency and dysuria. Slight dyspnea, occasional palpitation and precordial pain were among the other complaints.

This patient's frequent attacks of abdominal pain had made her practically an invalid the last six months. Morphine seemed the only drug offering any relief. Nitroglycerin had been used without benefit. Attending physicians, often finding it difficult to call and administer hypodermics, had instructed the patient in self-administration and left with her an ample supply of morphine which she tried courageously to use sparingly. At times she weathered a spell without the drug; while again, two or three hypodermics might be needed to subdue an attack.

Physical examination revealed an apparently healthy and at least not acutely ill white female, 5 feet, 6 inches tall, who weighed 180 pounds. The skin and sclerae were clear. There was an old thyroidectomy scar without evidence of recurrence. The heart and lungs were not unusual. The blood pressure was 124 mm. systolic and 80 mm. diastolic; the pulse was 80, regular and of good quality. The abdomen was obese with old upper right rectus and low midline scars, but otherwise normal. Nothing unusual was made out on vaginal or rectal examination.

Clinical investigation showed the erythrocytes to be 4,660,000; the leucocytes 5200 per cubic millimeter of blood, and the hemoglobin 90 percent. The Kahn was negative. The urine had a specific gravity of 1.022 and a trace of albumin. Gastrointestinal and K.U.B. x-rays were done. They were negative except for non-visualization of the gallbladder. E.K.G. and x-rays of the chest were normal.

It was quite difficult to decide upon a course of treatment for this patient whose only symptom was pain. The character and distribution of the pain were typical of gallstone colic but the self-administration of morphine created the suspicion of addiction. However, chiefly because of the previous experience of a stone in the cystic duct exploration was advised. Operation was done on December 7. The old upper right rectus scar was excised. The common duct was exposed with difficulty. It appeared normal. In the region of the cystic duct was found a small hard mass which proved to be a single stone approximately 1.5 cm in diameter which was impacted in the stump of the cystic duct. This patient had an uneventful postoperative course following removal of the stone and exploration of the common duct. She was seen at intervals for the next 3 years and remained free of pain.

Case 3. Mrs. E. L. T., a 46 year old white housewife with 2 children, was first seen on 7-7-54. In 1927 an acutely inflamed appendix was removed and in 1942 a cholecystectomy was done for 2 stones. She remained relatively free of abdominal discomfort for 10 years. Typical gallbladder colics recurred in 1952. Pain started in the epigastrium and radiated to the back. Vomiting at times gave relief. Fried and fatty foods caused vague abdominal uneasiness but there was no history of jaundice, chills, fever, or abnormal stools. The other systems were essentially negative.

The patient was 5 feet 3½ inches tall and had a constant weight of 130 pounds. The temperature was 98.6, the pulse 80, the blood pressure 120/78. There were old upper right and low right rectus scars. A right ovarian cyst the size of an orange was an incidental finding. The hemoglobin was 100%, the leucocyte count was 6500 with normal differential. The urine was normal. On 7-9-54 an x-ray of the stomach

was normal. On 9-15-54 with the new dye, Cholografin, available, Dr. Robert Shepard examined the patient roentgenographically. The appearance of the dye in the hepatic biliary radicles and the kidney pelvis was first noted in 15 minutes. Subsequent x-rays taken at 25 and 55 minute intervals revealed normal appearing hepatic and common ducts. In addition, the cystic duct and a small portion of the gallbladder measuring 1 cm in length were outlined. No stones were seen. On 8-21-54 the abdomen was explored through the old upper right rectus scar. Dense adhesions bound the duodenum and hepatic flexures of the colon to the under surface of the liver. By careful sharp dissection a small remnant of the ampulla of the gallbladder and a thin cystic duct were exposed and removed. The common duct was quite small and easily compressed. In the absence of jaundice it was not opened. The pancreas felt normal. An additional small low midline incision was used to remove the right ovarian cyst.

The patient's recovery was uneventful and she remains well to this date.

The pathologist reported the specimen to consist of a gallbladder remnant and cystic duct measuring 2 cm. x 1. Histologically there was fibrosis of the wall and flattening of the mucosal folds.

Summary

1. The post-cholecystectomy syndrome is discussed with emphasis on residual cystic duct disease as an inciting factor.

2. Three clinical cases are presented and attention is called to a new intravenous contrast medium, Cholografin (Squibb). This is the first radio-opaque medium to outline satisfactorily the intra and extra hepatic biliary ducts.

3. The preliminary reports on the use of this drug are very encouraging.

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Renal Failure*

ROBERT LICH, Jr., M.D.**

Louisville

Renal failure may be either organic or functional in origin. If organic, the process may be, if at all, only partially reversible, whereas, functional insufficiency is usually reversible. As a group, the functional or prerenal insufficiencies are due to alterations in the circulating plasma volume of the kidney which may be caused by arterial hypotension, dehydration and electrolyte imbalances. Organic disturbances occur in renal and postrenal conditions and are generally irreversible. It is for these reasons that it is essential to determine the precise cause of renal dysfunction so that the most efficacious treatment may be instituted.

Causes of Renal Failure

The causes of renal failure may be divided into three principal groups: 1) prerenal, 2) renal and 3) postrenal.

Severe arterial hypotension is not an uncommon cause of prerenal kidney failure. In this situation the arteriolar glomerular pressure is diminished to a point at which filtration ceases. This is usually a reversible state so that when the arterial tension is reestablished renal function returns to its previous level provided that no permanent damage occurred from sus-

*From the Section on Urology, Department of Surgery, University of Louisville School of Medicine. This paper was read before the Kentucky Chapter of the American Academy of General Practice at its Annual Meeting in Louisville, April 20, 21, 1955 and is published in the Journal of K.S.M.A. through the courtesy of the Journal of K. A. G. P.

**Professor and Chief of the Section on Urology, University of Louisville School of Medicine.

tained anoxia to the kidney tissue. In instances of localized intrarenal arterial hypotension (renal infarcts) there may occur renal failure within a portion of the kidney and this may not be demonstrable by either clinical or biochemical examinations because the residual kidney substance is sufficiently great to compensate for the focal disturbance. On the other hand, in renal artery thrombosis the entire kidney is devoid of circulating plasma and a renal failure rapidly results. This diagnosis is established by the lack of urine being secreted from the affected kidney and the absence of function as demonstrated at intravenous pyelography.

Dehydration reduces renal circulation in much the same manner as arterial hypotension. The most common examples in this category are protracted vomiting, continued gastric suction, prolonged diarrhea, fluid loss from extensive burns, and intestinal fistula. In considering these various conditions it is apparent that a definite overlap must exist between dehydration and electrolyte imbalance.

One of the basic functions of the kidney is the maintenance of the several cation and anion concentrations within narrow limits in the circulating plasma. These ions are held in equilibrium and whenever there is a shift in one a compensatory change occurs in another.

The outstanding example of this occurs between the acid radical ($HCO-_3$) and sodium ($Na+$). The sodium ions are held by an equivalent value of HCO_3. However, the HCO_3 can be varied by pulmonary ventilation and the $Na+$ so liberated represents the reserve available base or a total of 27 mEq. For example in severe diarrhea the sodium is lost in excess of the acid radicals and acidosis necessarily ensues. If this process continues the circulating plasma is diminished by the concomitant change in the electrolyte pattern and a variable degree of renal dysfunction follows.

Another instance is that found on occasion in uretero-sigmoidostomy in which the chloride ion of the urine emptied into the bowel may be reabsorbed, an excess of chloride ion accumulating in the circulating plasma. Since there is an increase in the acid radicals acidosis follows. But this is only a portion of the entire chemical picture. The degree of acidosis causes pulmonary ventilation to be increased and thus the carbon dioxide is diminished, with a subsequent fall in the plasma bicarbonate. The reduction in plasma bicarbonate offsets the chloride gain and equilibrium is reestablished. If on the other hand, the chloride excess continues, the above described mechanism is inadequate to control the acidosis and there finally develops a degree of acidosis associated with renal insufficiency along with other electrolyte changes. The necessity of specific diagnosis in the treatment of renal insufficiency is thus quite apparent.

Therapy of Prerenal Insufficiency

In this discussion of the treatment of prerenal functional disturbances of the kidney we will assume the presence of an organically normal kidney.

Arterial hypotension and dehydration is treated by blood or fluid replacement therapy along with such other corrective measures as are necessary. In recent years certain drugs have come to be useful in this picture, but it is to be remembered that such drug therapy is but a temporary expedient which can effect only temporary benefit until the source of the disturbance is found and corrected.

In considering the problem of dehydration the following laboratory studies are helpful in estimation of its degree and improvement with therapy:

1. Volume and specific gravity of last urine
2. Erythrocyte count
3. Hematocrit level
4. Non-protein level of the blood
5. Total plasma protein
6. Chloride level of the blood
7. Potassium level of the blood
8. Carbon dioxide combining power of the blood or pH of the blood

The number of erythrocytes in conjunction with the hematocrit level will demonstrate the degree of hemoconcentration and will give an estimation of dehydration. The normal hematocrit in the male is 40 - 54 per cent and in the female 37 - 47 per cent. The repetition of these studies will afford an excellent and simple method of determining the degree of hydration that is being accomplished during the course of treatment.

The non-protein nitrogen level in the blood is of value in estimating not only the degree of dehydration, but may be an important clue as to the renal dysfunction as the process of combating dehydration is undertaken. Another factor that must be constantly kept in mind is the elevated non-protein nitrogen level of the blood due to extrarenal causes (protein destruction, gastro-intestinal bleeding) which may

materially influence parenteral therapy.

Plasma proteins when abnormally low influence the extravascular retention of fluids. If the plasma proteins fall below 5.5 grams per 100 cc. of blood replacement must be considered, but the use of plasma indiscriminately is not without danger since the contained chloride may introduce a detrimental factor. Salt-free plasma is the agent of choice.

The estimation of the plasma chloride level is particularly valuable in patients who have lost appreciable quantities of fluids from the gastro-intestinal tract. Normal values for plasma chloride when expressed as sodium chloride is 560 mg. per 100 cc., as chloride 365 mg. per 100 cc. or 103 milliequivalents per liter. Plasma chloride loss is an indication of extra-cellular fluid loss. Plasma chloride depletion may be an indication that some part of the body is removing the chloride and thus a lowered plasma chloride in the absence of vomiting or gastro-intestinal fluid loss should be eyed with suspicion. In such instances as ascites the plasma chloride level will remain depressed since the chloride is transferred to the ascitic fluid and as more chloride is given the ascites is increased. Another example is that of disturbed renal function during severe dehydration in which the kidney continues to fail to reabsorb the chloride and thus in spite of chloride administration the plasma chloride remains abnormally low. In this regard and whenever chloride therapy is employed it must be recalled that if an excess of chloride is given it does not produce an abnormally high plasma chloride value, but rather the excess chloride passes directly into the tissues to produce hyperhydration and edema. It is for this reason that the promiscuous use of sodium chloride parenterally must be condemned.

Potassium is lost during prolonged periods of vomiting or by measures designed to relieve vomiting or gastro-intestinal distention (Levine or Miller-Abbott drainage) or small bowel fistula. In addition the intravenous administration of dextrose tends to wash out additional potassium. The recognition of potassium deficiency depends upon the consideration of the possibility. The condition is characterized by certain electrocardiographic changes which return to normal upon potassium replacement. Subjectively the patients appear to be extremely ill and complain of severe muscle weakness or asthenia.

The blood pressure is often low with a disproportionately low diastolic pressure. The characteristic electrocardiographic changes are lengthening of the Q-T interval, depression of the S-T segment and possibly an inversion of the T wave.

Potassium excess may occur whenever the potassium is not excreted normally by the kidney or in dietary excesses. Orange juice and beef broth have an unusually high potassium content. These patients may complain of severe pain since hyperkalemia may result in abnormal excitation waves along the nerve fibers; but as the condition progresses the patient becomes listless and exhibits marked mental confusion. The electrocardiogram in this condition shows a prolonged P-R interval, a shortened QRS complex and a peaking of the T wave.

Generally speaking we are accustomed to consider that the carbon dioxide combining power of the plasma indicates unequivocally either acidosis or alkalosis. (Normal, 55 to 65 volumes per cent or 24 to 29 mEq.) On the other hand, if one considers the formula

$$p^H = p^K + \log \frac{B.HCO_3}{H.HCO_3}$$

it can be readily seen that one is measuring only one of three variables: pH, $B.HCO_3$ and $H.HCO_3$. In determining the carbon dioxide combining power of the blood the amount of $B.HCO_3$ in the blood is measured. Thus it is possible that the carbon dioxide combining power of the blood may not indicate a true acidosis or alkalosis. In uncomplicated gastro-intestinal fluid loss the carbon dioxide combining power of the blood indicates a true acidosis or alkalosis. However, when this condition is associated with respiratory disturbances the carbon dioxide combining power of the blood may not indicate the true pH of the blood. In instances of hyperventilation the $H.HCO_3$ of the blood may be sufficiently depressed to produce an alkalosis and this situation has been recorded in instances of encephalitis, hysteria and febrile states. Hypoventilation with a resultant carbonic acid excess and acidosis is sometimes seen in emphysema, asthma and opiate poisoning with marked respiratory depression. This potential paradox must always be considered in treating acidosis or akalosis and can be avoided if it is possible to obtain a determination of the blood pH rather than a carbon dioxide combining power.

Resume of Therapy for Electrolyte Imbalance

The logical method of reporting blood chemistry values is as milliequivalents per liter rather than milligrams per 100 cc. of blood because of the ease of calculating replacement therapy. Milligrams per 100 cc. can be converted to milliequivalents per liter by the following formula:

$$\frac{\text{mg./100 cc. x 10}}{\text{atomic wt.}} \times \text{valence} = \text{mEq./l.}$$

Helmer and Kohlstaedt have suggested the following conversion table:

Conversion of mg.% to mEq./l.

	Divide By	Multiply By
Calcium	2.0	0.5
Chlorides (from Cl)	3.5	0.286
(from NaCl)	5.8	0.172
CO_2 combining power	2.22	
Magnesium	1.2	0.833
Phosphorus	1.7	0.58
Potassium	3.9	0.257
Protein		2.43
Sodium	2.3	0.335
Sulfate	1.6	0.625

The following formula may be used as an index for the amount of electrolyte necessary which must be individualized by such clinical factors as the condition of the patient, initial hydration, extraurinary losses, fever, etc.:

$$\text{mEq./l} = \frac{\text{pt.'s wt. (kg.) x (normal mEq./ 1. - pt.'s mEq./l)}}{5}$$

needed

Plasma protein deficiency can be corrected by plasma remembering that the chloride contained in plasma may be detrimental. Similarly some protein hydrolysate solutions contain as much as 2 gm. of salt per liter.

Chloride deficiency occuring in the wake of prolonged parenteral fluid therapy is best replaced by 500 cc. of isotonic saline given every other day. Gastro-intestinal fluid lost by aspiration or vomiting is replaced volumetrically with isotonic saline. Grossly deficient chloride levels in the blood may be replaced by calcium chloride (1%), sodium chloride (0.8%) or ammonium chloride (1%). (Warning: excess chloride resides in the tissues so that blood chloride does not give an indication of chloride excess.)

Chloride excess usually occurs during overenthusiastic saline administration and is suggested by a dry skin, mouth and tongue, along with hyperpnea, acidosis and oliguria or even anuria. Parenteral and oral salt free fluids in large amounts will return the chloride to the circulation for elimination by the kidney.

Potassium deficiency may be corrected by adding buffered potassium phosphate to the electrolyte solution. In severe deficiency the replacement solution of choice should contain relatively more sodium cations than anions; ie.,

½ 5% glucose with normal saline
½ 1/6 molar sodium lactate buffered potassium phosphate (70 mEq.)

Potassium excess can be washed free by the use of large amounts of 5 per cent glucose, using sufficient insulin to cover this amount of glucose if necessary. In situations of extreme urgency, intestinal lavage with hypertonic sodium sulfate to effect violent diarrhea may be quite effective. Peritoneal dialysis or the use of the artificial kidney may be considered, but the hazards and limited availability of either of these methods is self evident.

Sodium loss is corrected by the use of sodium chloride and the amount necessary can be determined by the following formula:

$$\frac{\text{140 - amount Na in mEq. in plasma}}{4} = \text{Na necessary for replacement}$$

To prevent a chloride excess the calculated amount of sodium is given 1/5 as sodium chloride and 4/5 as sodium lactate.

Acidosis in a mild form may be satisfactorily combated with lactated Ringer's solution. This solution or 1/6 molar sodium lactate should not be employed in the presence of liver disease since the function of these solutions is dependent upon the liver to effect a split and free the sodium for the treatment of acidosis.

In severe acidosis sodium lactate solution or sodium bicarbonate is used and the amount may be calculated by the formula of Hartmann and Senn[2]:

$$\text{mMq} = \frac{(60 - CO_2)\ 0.7\ W}{2.24}$$

mM = millimols of sodium bicarbonate or sodium lactate

1 mM = 0.084 gm. sodium bicarbonate or 1 cc. molar sodium lactate

CO_2 = serum carbon dioxide combining power in volumes per cent

W = body weight in kilograms

As a rough estimate 0.5 gm. of sodium bicarbonate per kilogram of body weight may be given in severe acidosis and the amount seldom exceeds two liters.

Alkalosis is usually treated satisfactorily with sodium chloride. In severe forms either hydrochloric acid or ammonium chloride may be used. Moyer[3] has suggested that if carbon dioxide combining power determinations are not available one-hundredth molar solution of hydrochloric acid may be given until carpopedal spasm and hypotnea disappear. This same author similarly employs 0.9 per cent solution of ammonium chloride. Cullen has devised the following formula:

cc. HCl = CO_2 in excess of 70 x 0.023 x W
HCl = concentrated HCl or 36 per cent
CO_2 = plasma carbon dioxide combining power in volumes per cent
W = body weight in kilograms

Renal Causes for Renal Insufficiency

The renal lesion here is one of nephrogenic location and whether it involves the entire nephron or just a portion of it depends upon the specific process. In glomerular nephritis the lesion is primarily that of the glomerulus and the tubules are involved secondarily, while in pyelonephritis the lesion is initially extraglomerular, tubular damage being the primary manifestation with a secondary glomerular infarct and hyalinization of the glomerulus.

Chronic glomerular nephritis is manifest by the amount of albumin which appears in the urine, since in this condition the glomerular membrane is disturbed and the glomerulus leaks albumin into the urine. The opposite picture appears in pyelonephritis which is a direct parenchymal infection and early tubular dysfunction is followed by obliteration of the glomerulus. There are however common findings in renal failure with azotemia and these extracellular changes in the circulating plasma are listed below:

Increased	Decreased
Organic acid	Water
$PO_4^{=}$	Plasma volume
$SO_4^{=}$	Cl^{-}
	Na^{+}
	K^{+}
	Ca^{++}
	$BHCO_3^{-}$

The treatment of chronic glomerular or pyelonephritis embodies not only the eradication of the cause, but the maintenance of normal electrolyte balance in the circulating plasma.

Another important renal cause of kidney failure is that of lower nephron nephrosis. The most common causes for this condition are chemical poisonings (carbon tetrachloride fumes and sulfonamides), mismatched blood, prolonged periods of shock or hypotension, burns, congestive heart failure, obstructive uropathies and toxemia of pregnancy.

The first step in treatment is the attempt to prevent its occurence or immediately re-establish the impaired renal circulation. When oliguria or anuria occurs, the treatment must consist in maintaining a normal electrolyte balance. The normal water loss from the body must be replaced and none added; the daily fluid intake without fever or vomiting must not exceed 1000 cc. If the patient is not seen until several days following the onset of anuria and the treatment has been one of "enthusiatic forced diuresis" it is necessary to discontinue all fluids and permit the patient to "dry out." The amount of vomitus should be replaced volumetrically with normal saline or hypertonic saline depending upon the hydration of the patient. The diet should be of high carbohydrate content and orange juice and broths are to be avoided because of their high potassium content. Proteins are not used in order to prevent additional nitrogenous products from entering the blood.

The period of oliguria or anuria may continue from three to fourteen days, during which time the tubules are undergoing regeneration and the patient's life depends upon the maintenance of fluid and electrolyte balance. Following the period of anuria, when diuresis occurs it may be either gradual or explosive in onset. During diuresis the electrolyte pattern must be actively observed and it is especially important to watch the chloride level which may drop precipitously and require as much as 30 or more grams replacement in 24 hours. However, in sulfonamide poisoning there may be a rapid reabsorption of the chloride, resulting in death due to acute cerebral edema.[5]

Postrenal Kidney Insufficiency

This condition is occasioned by any obstructive uropathy and may be either acquired or congenital in origin. The therapy resolves itself into affording the patient unobstructed urinary drainage, which in most instances involves surgery. In most cases there is an associated pyelone-

phritis which requires treatment similar to that outlined previously.

Summary

The subject of renal insufficiency has been briefly reviewed. The associated electrolyte abnormalities have been mentioned, and the practical considerations in replacement therapy outlined. To cover completely such a vast subject is not the intent of this paper, but it is hoped that this material will assist in the understanding of fundamental problems.

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Anorectal Surgery*

A Study of Postoperative Problems

JOHN A. WIMBERLY, M.D.,** RUFUS C. ALLEY, M.D.,***
WILFORD L. COOPER, M.D.,**** and O. T. EVANS, M.D.,****

Lexington

This is a report of the postoperative course of three hundred patients who have had anorectal surgery. This study was made to evaluate our present treatment and to emphasize certain aspects of the immediate postoperative care. In making this study, the charts of three hundred consecutive patients were reviewed. The surgical technique was similar in all cases. The different methods used in the postoperative care have been evaluated and are described in this paper.

Pain

We have found the average preoperative patient apprehensive concerning the amount of pain he anticipates following anorectal surgery. An exception to this has been the patient already having severe pain, as with an acute abscess or fissure; in such cases the main concern is the present pain. Time spent in explaining the amount, type and extent of postoperative pain has proved to be of value in the reduction of anxiety and tension. These patients should be told that they can expect some pain when anesthesia wears off. Almost all of them had some postoperative pain, but only a few had severe pain that was not controlled by several doses of morphine. Most of our patients have been pleasantly surprised when they experienced much less pain than they had expected.

In an effort to evaluate the amount of pain in the postoperative period we tabulated the amount and type of narcotic, the number of doses, and the number of days that narcotics were required. While such a study of a subjective symptom has its limitations, it gives some idea of the amount of pain experienced by the average patient.

The narcotic used most frequently in this series was morphine. It was given in the early postoperative period unless some known contraindication existed. The amount and time interval of administration was governed by the response of the patient. In this series narcotics were administered by one of the following methods:

Method I: Morphine 1/6 or 1/8 grain, p.r.n. Check pulse and respirations before each dose.

Method II: Alternate Morphine 1/6 or 1/8 grain with Codeine ½ grain, given p. r. n.

Both methods produced adequate relief of pain. The alternating method proved to be successful in reducing the total amount of morphine required. With Method I, the morphine requirement was 3.9 injections per patient, as compared with 2.9 with Method II. However, in using the alternating method, one must be sure that the nursing and house staff realize the importance of following the codine promptly with morphine if the pain is not relieved within thirty minutes.

*From the Department of Proctology, St. Joseph Hospital, Lexington.
**Assistant Resident in Surgery, St. Joseph Hospital, Lexington.
*** Chief, Department of Proctology, St. Joseph Hospital, Lexington.
****Attending Proctologists, St. Joseph Hospital, Lexington.

The relief of pain should receive particular attention during the first eighteen to twenty-four hours following surgery. To reduce the amount of discomfort, it is important to "stay ahead of the pain" since the degree of pain intensity increases rapidly with its duration. The patient should be instructed to notify the nurse at the first sign of discomfort following surgery in order that a narcotic can be given at that time. In this manner the psychosomatic element of pain, which intensifies it, can be reduced greatly.

It is our belief that reduction of pain will significantly reduce the postoperative complications. In Table I comparison is made between patients receiving two or less hypodermic injections and the average patient (3.9 injections). This table illustrates the marked decline in complications in the relatively painless group.

TABLE I

	2 Hypos. or Less	Average (3.9)
Catheterizations	27%	51%
Multiple catheterizations	8%	13%
Foley catheterizations	4%	10%
Hours to void	16.5 Hrs.	20.7 Hrs.
Nausea and vomiting	12%	31%
Headache	5%	8%
Gas Pains	4%	9%

The amount of pain that anorectal patients have depends on numerous factors including the amount, type, and the quality of surgery, postoperative care of the wounds, urinary retention, and the psychologic pattern of the patient.

Surgery

Much can be done in the operating room to reduce the amount of postoperative pain. It is not within the scope of this paper to discuss the surgical techniques. It will suffice to state that the reduction of suture material buried in the tissue and reduction of tissue trauma to a minimum are axiomatic in reduction of postoperative pain. One of our staff members compares the anorectal tissue to that of the eye and pleads for similar gentle handling. The use of moist sponges, suction and Halsteadian hemostasis will be reflected in reduced postoperative pain. Electrocoagulation is used to some extent by all of our proctology staff to control bleeding. We consider judicious electrocoagulation a valuable addition to our technique, but we also realize that its over-use can greatly increase postoperative discomfort. Overzealous cauterization of excessive amounts of tissue should be avoided.

The dressing used immediately following surgery can be an important cause of postoperative pain if not properly applied and removed. We apply Oxycel cotton in small longitudinal strips to each wound to aid in hemostasis. Several hours after application this material may become saturated and serve as an uncomfortable plug, and therefore should be removed the evening of surgery. Over the Oxycel cotton we place several flats of gauze and a perineal pad held in place by several loosely applied strands of tape. We do not believe that any purpose is served by a tight pressure dressing since the anorectal tissues are not easily compressed by external pressure. The entire dressing is removed the evening of surgery, the wounds inspected, and a small piece of absorbent cotton is placed over the wounds.

Urinary Retention

Postoperative urinary retention should receive careful consideration. It is well known that anorectal pain will cause spasm of the bladder sphincter. When spinal anesthesia and narcotics are projected, into the picture, bladder tone is reduced, and urinary retention is apt to occur. In this study 51% of our patients were catheterized and 13% were subjected to multiple catheterizations. Ten percent were subjected to the discomfort of the Foley retention catheter for at least 24 hours. Table II.

TABLE II

Postoperative hours to void, average	20.7 Hrs.
Catheterizations	152 Patients or 51%
Frequency of catheterizations	
1 Time	112 Patients or 37%
2 Times	26 Patients or 9%
3 Times	12 Patients or 4%
4 Times	1 Patient or 0.3%
Foley catheterizations	29 Patients or 10%

As had been stated in the section on pain, the first step in combating urinary retention is to reduce the amount of postoperative pain. In the early postoperative period we reduce fluid intake, but allow cracked ice for alleviation of thirst. This is done to reduce the likelihood of atonic bladder distention from excessive fluids. The patients are encouraged to get out of bed the evening of surgery and walk to the bathroom with the aid of an attendant;

this appears to help in initiating early urination.

Urecholine was used routinely in one-third (100) of this series. Doses of 10 mg. were given orally every four hours until the patient voided. Although the use of Urecholine reduced the average initial voiding time from 21.3 hours to 19.6 hours, the percentage of catheterizations was increased by 9%. It appears that Urecholine, as used in this series, was of little value in preventing urinary retention. This drug was also used after urinary retention had developed. After an initial catheterization, if the patient still failed to void in a reasonable length of time, 2.5 mg. was injected subcutaneously. Many patients voided promptly after this procedure, and in these cases Urecholine appeared to be of value.

It was surprising to note the number of patients who voided for the first time while in the warm sitz bath. Many patients, after an uncomfortable evening without voiding, responded to the soothing and relaxing effect of the warm bath. This has suggested the possible value of earlier baths in promoting initial voiding and in reducing urinary retention. Actually, if the initial bathing hour could be moved up to the evening of surgery, bleeding should not be an important deterrent. However, if this plan is to be carried out successfully, patients should be observed closely for several hours following the bathing.

The use of sedatives containing antispasmodics (anti-cholinergics) is avoided until good urinary function has been established because of the tendency of these drugs to reduce bladder tone.

Wound Care

Proper care of the surgical wounds contributes much to the patient's comfort and ultimate good result. On the first postoperative day the rectal "swab out" treatment is begun. A cotton applicator moistened with a moderate amount of analgesic and astringent ointment is applied from the distal to the proximal surface of the wounds. The swab is pressed firmly down the entire extent of each wound. This procedure removes foreign matter and cleans the healing surfaces. Use of the cotton swab also prevents the edges of the wounds from adhering with superficial healing and bridging. We are not convinced that the ointment serves any function other than providing the patient with a small degree of comfort. Daily digital dilations are not done. We feel that the daily swabbing of the wounds serves the purpose of preventing strictures, at least until the patient begins to have regular stools. A digital rectal examination is performed four to six or seven days after surgery in order to obtain information concerning the adequacy of the canal, fecal status, and to break down any adhering edges of the wound which might prevent proper drainage. Digital examination is also in order when the patient complains of rectal fullness and a frequent urge to have a bowel movement. Unnecessary enemas may be avoided if this policy is followed.

The warm sitz bath is an important aid in proper wound care. It removes foreign and clotted material and contributes much to the patient's comfort. At least four to six baths are regarded as the daily minimum, although the patient is allowed to determine the actual time and number of baths. Each patient is instructed to pull the buttocks apart and allow the water to come in contact with the wounds.

Diet

Two methods of feeding have been used in our group of patients. One group was allowed a regular diet (with exclusion of seeds, nuts, and excessive condiments) as desired anytime after surgery. The second group was restricted to a liquid diet the day of surgery, a soft diet the first postoperative day, and progressing to a regular diet on the second postoperative day. The use of milk was discouraged in both groups, and the use of bulk fruits was encouraged. There was no significant difference in either group except for a marked reduction of nausea and vomiting in the group on a restricted diet (23% of the patients on regular diet vomited as compared to 10% of the patients on a restricted regime).

Bowel Movements

After initial postoperative pain has decreased, the patient focuses his fears on the first bowel movement. Here again, anxiety and tension add to his discomfort. The average patient in this series had the first bowel movement on the third postoperative day. Three methods as follows, were used to soften the stool:

(1) Bulk laxatives starting the first postoperative day. Fleet's Phospho-Soda,

2-3 drams, on the third postoperative morning followed by a plain water enema as needed.

(2) Bulk laxatives beginning on the second postoperative day. An oil retention enema on the third postoperative morning followed by a plain water enema.

(3) Bulk laxatives starting on the first postoperative day; no enema until after the first bowel movement unless for relief of excessive rectal fullness.

Little difference was noted in the results of these three methods. The oil retention enema serves to lubricate and soften the fecal mass with less discomfort to the patient on defecation. The great disadvantage of this method is that the oil droplets have a tendency to retard healing if not properly removed from the wound sites by an adequate plain water enema and hot baths. The method utilizing Fleet's Phospho-Soda accomplishes adequate stimulation of the bowel without objectionable use of oil, however, it does not have the lubricating and softening effect. The chief virtues of the third method are that it is simple, and it encourages early and natural function. All three methods have been satisfactory but the oil retention enema should be used only when followed by adequate cleansing of residual oil from the lower bowel.

Following the initial bowel movement, the patient's fears are eased, and the matter assumes its proper significance. The bulk laxatives are continued for a variable period as required, and the patient is instructed to take a plain water enema if he goes 48 hours without a satisfactory evacuation. Mineral oil by mouth should be avoided in anorectal surgery as it causes leakage, delayed wound healing, increased soreness, and may cause bleeding due to decreased vitamin K absorption.

Antibiotics

In our series, 48% of the patients received some type of antibiotic during the postoperative period. This number does not include those patients placed on one of the sulfa drugs prophylactically after catheterization. In comparing the patients who received penicillin or penicillin-streptomycin combinations routinely with those patients who did not receive any type of chemotherapy, little difference could be observed in the temperature charts. Eighty-six per cent of each group had no elevation recorded above 100. We concluded that the routine postoperative use of antibiotics is not necessary and should be avoided.

Patients requiring catheterization were routinely given Gantrisin or other sulfonamide for five days. It is thought that this significantly reduced the incidence of cystitis. In this series, no severe cases of cystitis developed in spite of the large number (214) of catheterizations. Occasionally, a case of cystitis occurs that does not respond to the sulfonamides. Urine cultures and antibiotic sensitivity tests should be done in such cases.

Postoperative Complications

1. DIARRHEA—This occurred occasionally, especially during the recent small epidemics of so-called "viral enteritis," and is always troublesome. Frequent liquid stools contaminate the wounds and may seriously retard healing. When diarrhea occurs bulk laxatives are discontinued. Daily plain water enemas are given to reduce the frequency and amount of wound contamination. The sitz baths also help in keeping the wounds clean and should not be discontinued. Medications, except paregoric and kaolin pectin mixtures, have not been of value. The addition of milk and the reduction of fruit juices in the diet appears to be of some help. Occasionally, it may be necessary to stop oral feedings for a short period of time. Erythromycin has been extremely beneficial in a few cases of staphlococcic enteritis secondary to Terramycin or Aureomycin therapy.

2. CONSTIPATION: This is a common postoperative condition due largely to the fear of pain or discomfort with the first few bowel movements. The use of bulk laxatives is highly desirable in its control. Judicious use of the plain water enema is also of value. An abundance of fruits and liquids and restriction of milk as routine postoperative measures help greatly.

3. NAUSEA AND VOMITING—The frequency of nausea (31%) is partly explained by the pain and nervous tension that many of these patients experienced. Preoperative medication, particularly morphine, may also play an important part. Although a number had limited episodes of nausea and vomiting, only an occasional patient had any protracted difficulty in this respect. Most patients required no treatment for this condition. Sedation and dietary management usually sufficed for the more protracted cases.

4. HEADACHES—We were pleasantly sur-

prised to observe the infrequency of this condition. Only 8% of the patients complained of headache during their entire postoperative hospital convalescence. This rate is probably no higher than that present in any group of hospital patients. There were no cases of definite "spinal headache" in this group. We attribute this to the refined spinal puncture technique of our anesthesiologists. This method has been described recently by Sergent[1].

5. Bleeding—The incidence of 1% of bleeding (severe enough to require some method of postoperative hemostasis) is also surprisingly low. We attribute this to proper hemostasis during surgery. When bleeding of any consequence occurs, the entire dressing should be removed and the wounds carefully inspected. Blood clots should be removed, and any bleeding point should be ligated or cauterized after local injection of 1 to 2 cc of 1% procaine solution. If no definite bleeding point can be found, a small amount of Oxycel cotton or Gelfoam should be placed over the bleeding surface. It is useless to try to stop the bleeding with a pressure dressing. In the rare cases of bleeding which cannot be controlled by the above methods, the patient should be returned to the operating room for proper hemostatic procedures under anesthesia.

6. Menstruation—Several of our patients have begun menstruating during their postoperative course. Although this has not been considered of much consequence in the ultimate outcome, it does complicate the treatment program. Therefore, we believe that, if feasible, elective procedures should be timed so that menstruation will not be a factor during the immediate postoperative period.

1. Sergent, W. F., Twenty-six Gauge Spinal Needles for the Prevention of Spinal Headache; American Journal of Surgery, Vol. 85, Page 98; January 1953.

Summary

A study of 300 charts of postoperative anorectal patients has been made in an effort to evaluate the postoperative treatment. This study has been incorporated into a general discussion of the postoperative care of these patients.

Treatment of Diabetic Coma*

HOWARD F. ROOT, M.D., F.A.C.P.**

Boston, Massachusetts

Diabetic coma is the unique complication of diabetes, resulting from insulin deficiency and failure of diabetic control. Although the name implies unconsciousness, patients with diabetic acidosis are in grave danger long before unconsciousness appears and, therefore, the term coma is properly applied to early as well as late grades of diabetic ketosis. The disturbance in carbohydrate, protein and fat metabolism resulting from insulin deficiency has many aspects. However, primarily it is the failure of carbohydrate metabolism which results in excessive oxidation of fat and consequent increased production of the ketone bodies which characterizes diabetic coma. It is (1) always an emergency, (2) always remediable if diagnosis is made early and sufficient treatment is given, and (3) it is preventable.

*This paper was read before the Kentucky Chapter of the American Academy of General Practice at its Annual Meeting in Louisville, April 20, 21, 1955, and is published in the Journal of K.S.M.A. through the courtesy of the Journal of K.A.G.P.

**Medical Director, Joslin Clinic and Associate in Medicine, Harvard Medical School, Boston, Massachusetts.

Incidence

At one time, diabetic coma was the chief cause of death and the almost inevitable culmination of a diabetic patient's history. Before the discovery of insulin, it was rare that a diabetic child lived more than 2 years. Actually it caused the death of three-fifths of all patients dying in the period before the introduction of the undernutrition treatment by Frederick Allen. During this period, mortality fell to 41 per cent. With the introduction of insulin—the beginning of a new era—diabetic coma was successfully treated and today no one needs to die of diabetic coma unless complications, in themselves fatal, are present.

Historic

Prior to 1857, there had been references to the wine-like odor of the breath in severe forms of diabetes. In that year, Petters[1] identified acetone in the breath,

(1) Petters Acetetonurie. Prager Vierteljahrsschr; 55, 1857.

blood and urine and developed a theory that acetone was the cause of diabetic coma. It was soon found when acetone tests became available in the clinic that acetonuria might occur in other conditions besides diabetes.

In 1850, the French writer, Boussingault, developed a method for the estimation of ammonia in the urine. The highest percentage of ammonia in the urine was found in the sample of elephant's urine. The next highest was found in the urine of a woman who had diabetes.

In 1868 Gerhardt recorded the fact that the urine of patients with severe diabetes gave a color reaction with ferrous chloride, a test we now recognize as identifying acetoacetic acid. The famous description by Kussmaul in 1874, emphasized the contrast between the powerful respiratory movements and the extreme weakness of the patient.

Frederick Walter in 1877 published the results of careful experiments with animals. Administering acid to these animals he showed clearly the sequence of symptoms—anorexia, weakness, rapid respiration, coma and death—which resulted. In animals receiving a lethal amount of hydrochloric acid the CO_2 of the blood fell to 2.07 volumes per cent. He clearly appreciated that the quantity of carbon dioxide in the blood was essentially in proportion to the quantity of alkali contained in the blood.

The theory of electric dissociation developed out of the work of Svante Arrhenius and Vant'Hoff at the turn of the century. It is sometimes forgotten, although the blood is said to be neutral with a pH of 7.4, that actually if you use red litmus paper it turns blue in the blood.

Soon Minkowski showed that the excessive amount of acid found in the urine was Beta hydroxybutyric. Mangus Levy showed that it was the levo-rotatory form and developed an optical method for its estimation. Naunyn recognized the tremendous loss of alkali and repeatedly referred to the condition as alkalipenia. In 1900 the part played by the liver became clearer, especially the fact that excessive ketones were formed from fat in the liver. "Fat burns in the fire of carbohydrate, but without carbohydrate it smokes," said Woodyatt in 1916. A man fasting for a 31 day period, excreted a maximum of 7.0 grams of oxybutyric acid in a 24 hour period. Forsner, by forcing feeding of fat produced an excretion of 42.8 gms. of "acid Bodies" in 1 day. In 1916, L. J. Henderson of Harvard, changed the terminology and acidosis was applied to the lowering of the alkaline reserve.

The studies of antiketogenesis in this country initiated by Rollin Woodyatt dominated the field at the time that the discovery of insulin came about. Following the discovery of insulin, attention was centered on the extraordinary alterations in carbohydrate, protein and fat metabolism and suppression of the excess ketone formation in the liver which followed its use in diabetic coma. In the last 10 years, attention has been concentrated upon the dehydration and losses of electrolyte, especially potassium, and consideration of the best methods for repair of these losses.

Today, the chief points of issue in the treatment of diabetic coma are related to insulin dosage, the value of the early administration of glucose and the necessity for giving additional potassium, magnesium and phosphate.

Treatment Today

During the past 30 years, 864 cases of diabetic coma have been treated at the New England Deaconess Hospital (see Table I). We use the word diabetic coma for those patients with diabetic ketosis in whom the carbon dioxide of the blood plasma is 9 milliequivalents per liter (20 volumes per cent) or less. This arbitrary selection of patients recognizes that patients may be critically ill before this level of CO_2 is reached. However, the reason for this selection of patients is a clinical one. Prior to the use of insulin, practically no patients with diabetic coma recovered if the CO_2 of the blood plasma was below 20 volumes per cent, whereas it was not uncommon for the treatment in those days to result in recovery of patients with higher values. However, in this series are included in a rough way patients who without the aid of insulin would have died. These 864 episodes of coma occurred in 643 patients whose ages ranged from 11 months to 77.5 years of age, of these, 414 were females and 229 were males, a disparity between the sexes quite unexplained by the relative incidence of the disease in women and men. Somewhat less than one-third of the cases are under 15 years of age and in this age group diabetes is fully as common in males as in females. A striking fact is that the average age of patients with diabetic coma has remained almost constant throughout these 30 years. Extremes of age do occur

TABLE I

864 CASES OF DIABETIC COMA

(643 Patients)

Cases No.	Age	D.M. Yrs.	Blood Sugar	Blood CO_2 mm.	Ins. Units	Fatal Per Cent
52 (1923)	31	3	480	6	161	18
411 (1927)	30	4	501	5	208	11
341 (1940)	29	7	536	6	302*	3
60 (1951-53)	30	7	511	6	344*	5

*In addition, 20 to 420 (ave. 72) units given 215 cases prior to admission on phone order.

and actually in babies diabetes is usually discovered only when the child is in acidosis.

The first striking feature of the series is the changing duration of diabetes prior to coma. In the earlier years, patients had had diabetes an average of only 3 to 4 years but in the last 12 to 13 years, the average duration of diabetes prior to coma has risen to 7 years. This change may be attributed to a number of factors which include 1.) the more frequent diagnosis of diabetes before coma through diabetic detection drives, 2.) the wider education of patients in the use of insulin, diet, and urine testing to control their disease, 3.) the improvement in treatment of ketosis, 4.) and the discovery of the antibiotics which have rid diabetes of the severe infections to which they are particularly prone. A further striking feature is the fact that the average blood sugar and CO_2 level have remained fairly constant making it evident, that over the years the severity of the acidosis has been about the same, and the improved results seem, therefore, more clearly attributable to improvements in treatment. Indeed, we feel sure that the change indicated in the insulin dosage is the most important cause of the decline in the death rate. Thus, it will be noted that in the first 24 hours only 161 units were given in the earlier period but in the last 10 or 15 years, the average amount of insulin given in the first 24 hours has been more than 300 units. Indeed, 344 units, the average during the last 2 years for 60 cases, is the highest amount yet given. Even this figure is less than the truth because, in these recent years, more and more frequently we have ordered insulin given to the patient in the ambulance on the way to the hospital. Our feeling is that the insulin given in the 2 or 3 hours prior to admission has in many cases been a most important element in preventing the development of insulin resistance and a graver condition upon arrival.

The death rate has fallen from 18 per cent in the early years to only 3 per cent in the 341 cases between 1940 and 1951. In the 2 years ending 1953, 3 deaths from anuria, hypopotassemia and pulmonary edema have raised the average to 5 per cent. If one takes the period from 1940 to 1953 the death rate percentage is 3.5. We hardly expect that this percentage will fall in any considerable series of patients because, with the increasing average duration of diabetes, more and more frequently will diabetic coma be complicated by fatal factors such as coronary occlusion and the uremia of the diabetic nephropathy.

Insulin

A patient developing or actually in diabetic coma needs insulin immediately. Therefore, the first question even before the patient arrives at the hospital is the dosage to be given. When information making the diagnosis of coma certain is given over the telephone, usually insulin in dosage varying from 20 to 50 or even 100 units can safely be given. Actually, any patient in diabetic coma deserves treatment in a hospital. As soon as plans for the patient's admission are known, preparations for his arrival and treatment should be made. Hot water bottles, blankets, stomach and rectal tubes, salt and glucose solution, insulin and stimulants should be assembled. A special coma cart with these materials has proved of great use in many hospitals.

Before giving insulin, the first step is the diagnosis. The differential diagnosis must first of all include the possibility that the patient's unconscious state is due already to overdosage of insulin. Therefore, no insulin is ever given to a drowsy

or unconscious diabetic patient without evidence from the urine or blood sugar test that the patient is in need of it.

In Table II are summarized the insulin dosage in the first 3 hours and in the first 24 hours of 213 coma cases treated at the Deaconess Hospital between 1946 and 1953 The proper goal is to ascertain as nearly as possible the patient's total insulin requirement and administer this dose as soon after the diagnosis as possible. Often one cannot predict the insulin requirement until the second blood sugar test is available to demonstrate the degree of effectiveness of the first dose. In many patients, the initial dose of insulin may be only 40 or 50 units, particularly in children or young patients. For adults, larger doses are needed. In severe cases, especially with circulatory collapse, half the insulin dose is usually given intravenously. It will be seen from Table II that the insulin given in the first 3 hours after admission to the hospital has actually been about 50 or 60 per cent of the total amount required in the first 24 hours. Our feeling at present is that unless at least 50 per cent of the total amount required to reestablish normal metabolism is given in the first 3 hours that the speed of insulin administration has been too slow. The urgency of giving large doses of insulin in the first 3 hours rests upon the necessity of controlling polyuria, glycosuria and hyperglycemia. The excessive hypermolarity of the blood due to the excessive concentration of glucose exerts tremendous osmotic force causing withdrawal of water from cells and consequent intracellular dehydration. The more rapidly the concentration of glucose can be reduced, the more rapidly will intracellular rehydration proceed. Our custom usually is to give insulin in divided doses at frequent intervals, sometimes as often as once in 15 to 30 minutes. In the more severe patients with circulatory collapse, insulin is given intravenously commonly, and occasionally into the jugular vein.

In Table III is summarized an outline of the treatment of diabetic coma which has been developed over the years at the New England Deaconess Hospital and which serves as a summary of our present practice and as a guide in the treatment of cases. This outline emphasizes the importance of rapid decision and treatment hour by hour. Thus, in the first hour after admission, necessary laboratory data is obtained. The patient is catheterized. The urine is examined for sugar, acetone, diacetic acid, albumin, coma casts and pyuria. Blood chemistry is obtained. The patient is examined for complications and to establish surely the diagnosis of diabetic coma as against meningitis, cerebral hemorrhage and uremia. In the second to sixth hours, the endeavor is to control the diabetes and to bring the gastrointestinal tract into a state in which the taking of food may be begun. During the sixth to the twenty-fourth hours, the administration of food such as oatmeal gruel, orange juice or milk is begun in those patients of the less severe type. Obviously, in patients remaining unconscious for more than 24 hours intravenous alimentation only is possible.

TABLE II

213 COMA CASES - 1946-1953

Blood Sugar on Admission	No. Cases	Avg. Insulin 1st 3 hours	Avg. Insulin 1st 24 hours
		Units	Units
1300-1600	3	883	1683
1000-1300	13	514	825
600-1000	65	335	526
400-600	69	209	329
200-400	60	99	151
100-200*	3	71	140

*Low values due to insulin given enroute to hospital.

TABLE III

TREATMENT OF DIABETIC COMA

Joslin Clinic, New England Deaconess Hospital

FIRST HOUR AFTER ADMISSION Special nurse, preferably experienced in coma treatment, for the first few hours.

LABORATORY

1. **Urine.** Examine for sugar, acetone, diacetic acid, albumin, coma casts and pyuria. Catheterize if necessary.
2. **Blood.** Test for sugar, CO_2 content and nonprotein nitrogen, with emergency report inside the hour. White blood count.

CLINICAL

3. **Search for complications and establish diagnosis.**

   A. History to explain cause of coma.

   B. Physical examination, noting particularly—

   (a) State of consciousness, type of respiration, pulse rate, blood pressure, and rectal temperature.

   (b) Look for soft eyeballs, dry tongue, dilated stomach, cold and mottled skin, and impacted rectum.

C. X-ray chest and abdomen when possible.

D. ECG (a) coronary (b) potassium changes.

4. **Insulin.** 50 to 100 units of regular insulin subcutaneously at once for adults. In severe cases, especially with circulatory collapse, give insulin intravenously. If blood sugar exceeds 300 mg. per 100 c.c. and if the blood CO_2 content is 9 millimols per liter (20 volumes per cent) or less, the dose will need to be repeated. The insulin dose would be proportionately less (20 to 40 units) in young children, especially if diabetes is of recent onset. In cases with blood sugar between 600 and 1000 mg., give 200 units additional, and with blood sugar over 1000 mg., give 300 units additional.
5. **Gastric Lavage.** Use large tube, aspirate completely and wash stomach with warm water with greatest care.
6. Normal saline intravenously, 2000 c.c. It is desirable to change to a solution of saline lactate after the first liter of saline solution is given (to 700 c.c. saline add 1 ampoule (40 c.c.) 1 molar lactate and make up to 1000 c.c. with sterile distilled water). If lactate is unavailable, normal salt solution may be continued. Avoid too rapid administration, especially in older patients.
7. Keep patient warm yet avoid burns, as from hot water bottle.
8. Give potassium solutions by vein for definite indications (a) when blood analysis or ECG clearly indicates hypokalemia (b) when potassium depletion is probably present as a result of prolonged serious ketosis and/or deficient potassium intake (c) only in the presence of adequate urinary output, 25 meq per hour up to 100 meq may be given.

SECOND TO SIXTH HOUR The gravity of the case may require repetition of first hour's total insulin in the second hour.

9. Repeat blood sugar and CO_2 determinations after three hours. For rising blood sugar give insulin hourly 50-200 units or more according to physician's judgment of prognosis.
10. Fluids by mouth (as soon as tolerated), limited to 100-120 c.c. per hour of broth, ginger ale, orange juice, tea or coffee, to be sipped by patient or spooned by nurse. For children limit to 50 c.c. per hour at first. Then, if nausea and vomiting recur, withhold fluids orally for 12 hours (lavage stomach again if indicated) and then resume.
11. **Enema** for cleansing and to relieve abdominal distension.
12. Record and note changes in blood pressure, pulse and temperature hourly. Consider transfusion if in deep shock.
13. Urinalysis for sugar and diacetic acid every hour. Record hourly output as index of dehydration and renal function.
14. Antibiotics (parenteral) penicillin, streptomycin or aureomycin frequently needed.

SIXTH TO TWENTY-FOURTH HOUR

15. Repeat blood sugar and CO_2 determinations. Give insulin 50-200 units if blood sugar and CO_2 levels are not improving. Insulin (regular) may be given according to urine tests every 1 to 4 hours if fall in blood sugar has been satisfactory.

If test is —	Red	Orange	Yellow
Give —	20	16	12
	Green	Blue	
	0	0	units

For young children give half dose.

16. Soft or liquid food such as oatmeal gruel, orange juice or milk diluted half and half with lime water, not to exceed 10 gm. carbohydrate per hour. Glucose (5% in saline) I.V. only when blood sugar approaches normal.
17. **Urinary output.** Observe this closely and note with alarm any sign of oliguria. Treat with 1500 c.c intravenous saline if shock is persisting. Repeat as necessary. For anuria, associated with hypochloremia, give 50 c.c. of 10 per cent salt solution intravenously. Never give hypertonic glucose solution to promote diuresis. Beware producing excessive diuresis with consequent loss of base, especially of potassium.
18. Sudden onset of muscular weakness and shallow respiration suggest hypokalemia. Potassium may be given p.o. or i.v., if changes in ECG or in serum potassium are present.

SECOND DAY AND SUCCEEDING DAYS

19. Soft Food — Diet: carbohydrate 100 to 150 gms., protein 50 gms., fat 50 gms., Gradually return to standard diabetic diet for age and weight with carbohydrate 150 to 200 gms., protein 60 to 100 gms., fat 60 to 120 gms. daily.

ADDITIONAL NOTES

1. Differential diagnosis should include the acidosis of diabetic nephropathy in patients with diabetes of long duration. Uremia may result in retention of ketone bodies in the blood plasma, although they may be absent or reduced in concentration in the urine. Examine plasma for acetone by nitroprusside test* or quantitate ketone bodies in blood.

Total Ketones in Blood

	Mg. Per 100cc.
Normal	0 to 5
Non-Diabetic Uremia	5 to 60
Diabetic Coma	50 to 200+

II. To avoid pulmonary edema, rarely exceed 5,000 c.c. parenteral fluid in 24 hours and check frequently for signs of edema. If urinary output exceeds 40 c.c. per hour after parenteral fluid has been given up to 3,000 c.c., grave dehydration no longer exists.

III. Electrolyte-containing solutions: If serum K or electrocardiogram indicates need, 40 mEq K may be added to the intravenous solution. Potassium should not be given intravenously in excess of 25 mEq per hour! Rarely is it wise to exceed 80 mEq in 12 hours unless definite hypopotassemia is present and urine secretion is ample. After 12 to 24 hours if 3 to 4 grams potassium cannot be taken by the patient in diabetic diet, a simple solution may be taken in divided amounts. Thus, two hundred c.c. orange juice plus 2 grams potassium phosphate may be diluted with water to 500 c.c. Of this give 100 c.c. per hour. With fall in blood sugar and need for potassium, a 5 c.c. ampule (2 grams dibasic potassium phosphate and 0.4 grams monobasic potassium phosphate) may be added to 1,000 c.c. of 5 per cent glucose for intravenous administration if indicated.

IV. Electrocardiographic signs of

A. Low serum potassium (below 3.0 mEq).
   1. Lowered T waves.
   2 Depressed ST segments
   3. Lengthened QT, or appearance of U wave.

B. High serum potassium (above 6.0 mEq).
   1. High, peaked T waves.
   2. Wide QRS.
   3. Disappearance of P waves.
   4. Final disorganization of ECG.

Note: A normal ECG does not exclude K deficiency.

***Plasma Acetone Test:**

4 c.c. of blood in an oxalate tube centrifuged until clear plasma obtained. Make solutions of 1 in 2, 1 in 4, and 1 in 8 with normal saline or tap water. Place 3 drops of undiluted plasma and the three dilutions on separate small mounds of acetone test powder. Depth of purple color indicates concentration of acetone and in some cases may be used as a clue to insulin resistance.

The clear relation between the insulin requirement and the level of the blood sugar is seen in Table II. The importance of the blood sugar level rests upon the fact that hyperglycemia is due to intracellular breakdown of protein glycogen, and that the rehydration of the intracellular space is facilitated by the reduction of the blood sugar level and thus the reduction of the excess molarity of the extracellular fluid.

Fluids

The excessive dehydration and loss of electrolytes, two of the most important features of diabetic coma, are evident in the dry and inelastic skin, the dryness of the tongue and mucous membranes of the mouth and the soft eyeballs. Soon after insulin was introduced, it was evident that in advanced diabetic coma, the dehydration and starvation produced losses of electrolytes which exceeded the catabolism of the tissue represented by the nitrogen excretion. The chief aim in the treatment of diabetic coma with insulin and fluid is to make possible the restoration of normal feeding as soon as possible. Although normal salt solution has proven an effective method of rehydration in the great majority of coma cases, in patients profoundly comatose, in shock and with acidosis of long duration, the use of special fluids is clearly indicated.

When a coma case is seen he has lost extracellular water and electrolytes. These electrolytes are mainly sodium and chloride. The sodium has been lost in excess of chloride because the kidney will not excrete urine below a pH of 4.8. The sodium is not lost to bring urine pH up to 4.8. The kidney cannot produce acid (H ion) in quantities sufficient to reduce pH below 4.8. The ketoacids arrive in the kidney as salts of sodium due to blood buffers (or blood pH would fall to fatal levels) and when no further H is available, its supply being taxed to the maximum capacity for production, the sodium salt is excreted as such with loss of fixed base. At any time urinary pH is above 4.8 an uncompensated acidosis cannot exist unless there is kidney disease, interfering with acid production. In the presence of low plasma pH, the renal production of ammonia which can and does occur in the presence of an anion load ceases almost completely. Therefore, all the acid anions must be excreted in company with so-called fixed base. The net result is that more sodium is lost than chloride. In cases with vomiting, a usual accompaniment of acidosis, considerable additional chloride is lost. (Large amounts of water have been lost in which the concentration of electrolytes is lower than normally exists in extracellular fluid.) The diabetic patient, therefore, has usually an hyper-

tonic extracellular fluid and this hypertonicity has been greatly affected by the high concentration of glucose. Because of the law of osmotic equilibrium, the presence of a higher concentration of ions than normal in the extracellular fluid will command water to leave the body cells in an attempt to re-establish osmotic equilibrium. We, therefore, face a very severe combination of factors making for dehydration of the intracellular space. To correct this situation, water must be given. If we give 5 per cent glucose solution, we are giving a solution containing 50 grams of glucose per liter or 277 milliosmols per liter. The addition of these milliosmols to the already hypertonic extracellular fluid causes a tremendous increase in osmolarity. Ten per cent glucose will have even a more harmful effect. The ideal replacement fluid then contains sodium in excess of chloride and water in excess of the concentration of both these ions in the extracellular fluid. As a practical conclusion, we have suggested in the outline of coma treatment to use either normal saline intravenously or preferably a solution of saline lactate after the first liter of saline is given, made up as shown on the outline. The measurement of dehydration is difficult. It is important to give enough fluid and yet to avoid excessive amounts. If the patient is secreting more than 40 cc. of urine per hour by catheter after parenteral fluid has been given, serious dehydration no longer exists.

Gastric lavage should be carried out routinely in any patient who is in serious acidosis. The dilated stomach of diabetic coma is well known and the danger of aspirating fluid and producing pulmonary damage has been proved frequently at autopsy. The main purpose of the gastric lavage and the enema, however, is to prepare the intestinal tract for the taking of food which would include not merely water and glucose but protein, fat, minerals and vitamins.

Circulatory stimulants are practically never needed with children and in adults rarely produce any startling effects. Epinephrin or nor-epinephrin may be given subcutaneously for extreme collapse.

Blood transfusions have been used rarely in our patients but might be indicated in severe shock. It must not be forgotten that in older diabetic patients who may have coronary arteriosclerosis, the rapid increase in blood volume by the use of plasma or whole blood has more than once produced pulmonary edema or cardiac failure.

Glucose and Food

Glucose solutions are never given in the first hours of treatment of diabetic coma for many reasons. In the first place, the recent work of Seldin and Tarail has shown, again, that the giving of glucose increases the extracellular molarity and advances intracellular dehydration, which may be a factor in the renal failure of advanced coma. When glucose is given, then the use of the blood sugar level as a means of measuring or estimating insulin resistance is lost. As diabetic coma becomes more severe, insulin resistance may steadily increase. It is of primary importance to ascertain within the first 3 or 4 hours after admission whether or not insulin is effective and, if insulin resistance is present, rapidly to increase the dosage. Vitamins and antibiotics are frequently used. Antibiotics such as penicillin are used in unconscious patients in whom some hidden infection is suspected. Preparations of vitamin B complex may frequently be used during acidosis as a means of counteracting the tendency to and the danger of developing neuropathy as a result of the severe acidosis.

Complications of Diabetic Coma

Hypoglycemia is often feared but seldom experienced in diabetic patients in whom every effort is made to begin the feeding of the patient within 12 or 15 hours after admission. Our plan is to begin the oral administration of 10 grams of carbohydrate per hour within that period after admission. Under these circumstances hypoglycemia rarely is seen.

Circulatory collapse is the evidence of the terminal stage. The blood pressure falls, the patient becomes pulseless, urinary secretion ceases, the respiration becomes shallow, and death may ensue.

The Symptoms and Signs of Diabetic Coma

The warnings of the onset of diabetic acidosis and coma are vague and even to a doctor the diagnosis proves elusive. The diabetic patient who has not been following his diet may notice loss of weight, increasing thirst, frequency in passing urine and the urine tests may show a large amount of sugar present. Testing the urine for diacetic acid or acetone will give warning of the impending ketosis, but any unusual symptoms such as headache, restlessness, weakness, nausea and vomiting, drowsiness and finally the deep, painful

and rapid respiration of air hunger should be borne in mind.

The patient will show striking chemical changes including the lowering of the CO_2 of the blood, the marked elevation of the blood sugar and the presence of positive tests for acetone both in the blood plasma and the urine. If unconscious, he will be restless or moaning, as if in pain and have dry cold skin.

In the diabetic patient who has uremia as a cause for the low CO_2 of the blood, the eyeballs are not soft, vomiting may have been very prominent, blood sugar level may be high but the elevated non-protein nitrogen of the blood may be an important clue. The breath may be urinous instead of having the fruity odor of typical diabetic coma. The diagnosis of uremia in the diabetic patient is of great importance because such patients are not so sensitive to insulin as true coma cases and an error in insulin dosage may be disastrous.

The Lipid Metabolism

During diabetic coma or ketosis, severe disturbances of the lipid metabolism may be manifested by changes in the blood plasma. In some cases, the blood plasma may be creamy. The changes are characterized by a lipemia consisting principally of neutral fat, by hypercholesterolemia and varying degrees of lactescence. The arteries and veins of the eyes may have a fatty appearance, such that the arteries and veins seem to have the same color, a condition known as lipemia retinalis.

Lipids of the blood are carried in the form of lipid-protein complexes. Gofman[1] and his associates have studied lipoproteins by an ultracentrifugal technique and found they could be separated into various classes or bands, designated as Sf 0-11, 12-20 and so forth depending upon the density of the molecules. A series of 18 patients admitted to the New England Deaconess Hospital in diabetic acidosis or coma were studied by Tuller, Mann, Schertenleib[2], Roehrig and Root. Their results indicate very high values for the various lipoproteins during coma with extraordinarily high values particularly for the Sf 100-400 components. In general, the high values for lipoproteins were parallelled by increases in cholesterol although the changes in cholesterol were in some cases not nearly so marked as in the lipoproteins, and though dehydration and hemoconcentration played some part, it is evident that diabetic ketosis itself produces very extraordinary alterations in the serum lipids. The effects of treatment with insulin are very prompt but it is found that in following up these patients that not all return to normal levels within a short period of time. Although the degree of lipid disturbance associated with acidosis was varied, no patient failed to show some increase in the serum lipoprotein. This is particularly important in relation to the facts observed by Keiding, Mann, Root[3] Lowry and Marble whose study of young diabetic patients with diabetes of long duration showed that the high, abnormal levels of lipoproteins were associated with the most severe forms of diabetes and particularly lack of control of the diabetes. Early vascular disease and retinitis was most frequent in patients most severely out of control and with the higher lipoprotein values.

Lipemia retinalis was recently reported in a case of diabetic coma complicated by uremia by Kalinowski[4] and Miles. In the last 20 years, some 8 cases have been observed at the Deaconess[5] Hospital and a total of something over 60 cases are described in the literature. In this condition if one looks at the retina, arteries and veins show, instead of the usual contrast in color, a similar creamy color and often a silvery sheen. In a recent case, No. 39428, a boy aged 17 years with diabetes of 19 months duration entered the Deaconess Hospital in early diabetic coma. The blood sugar value was 410 mg., the plasma was creamy and the blood cholesterol value was 1785 mg. He received 130 units in the first 3 hours and in the first 24 hours a total of 238 units. In the following table are shown the serum lipoprotein values during a period of 45 days.

Serum Lipoprotein Values in Diabetic Lipemia

	Sf 12-20	Sf 21-35	Sf 35-100
	mgs.	mgs.	mgs.
Day	Per Cent	Per Cent	Per Cent
1	34	72	304
4	290	280	490
8	370	285	295
45	32	8	5

Prognosis

Prognosis of diabetic coma depends first upon the age. Older patients with damaged kidneys and hearts have a more serious prognosis than children. Cases of long duration are more serious. The more

(Continued on page 1018)

CASE DISCUSSIONS

FROM THE UNIVERSITY OF LOUISVILLE HOSPITALS

Myoma Obstructing the Birth Canal

Patient Protocol

A 37 year old negress, gravida 3 para 1, was admitted to the General Hospital on July 5, 1955, at term in labor. The last menstrual period had begun on September 22, 1954, so that the expected date of delivery was June 29 1955 by Naegele's rule.

On November 15, 1954, the patient came to the outclinic complaining of an abdominal mass which had been enlarging progressively for two months. The examiner noted a firm, irregular, fixed, non-tender mass rising to the level of the umbilicus, most prominent on the right side. The cervix was displaced retrosymphyseally, and on bimanual examination there was noted a mass filling the cul de sac of Douglas. The Friedman test was positive.

Four subsequent clinic visits were made, the last one being on January 27. A plain film of the abdomen on that day showed a rounded homogeneous opacity on the right side extending to the level of the umbilicus, and apparently arising from the pelvis. No bony structures were visualized in this mass, but there was an additional diffuse opacity overlying the left half of the abdomen, and this contained a fetal skeleton. Although the film was compatible with an abdominal pregnancy, the clinical diagnosis was pregnancy complicated by either ovarian tumor or uterine myoma, and it was decided to follow the patient in prenatal outclinic. However, the patient did not return until the time of her admission in labor.

From the past history it was determined that the menarche had occurred at age 11, and that thereafter the menses had been consistently regular. A pregnancy in 1935 had been delivered at term without difficulty; the child weighed 8 pounds at birth and was normal. In 1949, the patient aborted a fetus after two missed periods, and at this time her physician had told her she had fibroids and had advised that she have a hysterectomy. However, she refused the operation.

On July 5, 1955, the day of admission, the blood pressure was 162/98, and the pulse rate was 84. The positive findings were confined to the abdomen and pelvis. The abdomen was enlarged to a size compatible with a term pregnancy, and there was a large, firm mass in the right lower quadrant estimated to be about 15cm. in diameter. The fetus was readily palpable, and lay in LOA position with the unengaged head freely movable in the region of the left iliac fossa. The fetal heart beat was audible and regular. The fetal head could not be felt on rectal examination. The hemoglobin was 11.2 grams with hematocrit of 40 per cent. The leukocyte count was 17,600, with 82 per cent polymorphonuclear leukocytes and 18 per cent lymphocytes.

Labor was allowed to proceed for several hours, by which time repeated examinations made it apparent that no descent of the fetal head was occurring. A staff consultant stated the opinion that vaginal delivery was not feasible, and recommended delivery by cesarean section.

Twelve hours after admission, laparotomy was performed under spinal anesthesia. The gravid uterus contained numerous small myomas, and one large myomatous mass measuring approximately 24 x 12 centimeters was present on the right anterolateral surface of the uterus. The tumor mass displaced the fetal head superiorly and to the left, and was so located as to prevent its engagement and descent. An anterior longitudinal incision was made in the uterus, whereupon it became apparent that the placenta was implanted anteriorly. The incision was extended through the placenta, and a normal female infant weighing six pounds seven ounces was extracted without difficulty. Since the patient had specifically refused permission for hysterectomy, routine uterine and abdominal closures were performed.

Puerperally, the blood pressure continued to be elevated for several days, but otherwise recovery was uneventful, and the patient was discharged in good

condition on the seventh postoperative day.

Discussion

DR. DOUGLAS M. HAYNES: Although several clinically important complications may result from the co-existence of pregnancy and uterine myomas, only rarely do these tumors interfere with pregnancy and delivery. The principal disturbances of late pregnancy which may be produced by myomas are fetal malposition; uterine inertia secondary to myometrial disorganization; and obstructive dystocia, of which the patient under discussion furnishes an example.

Myomas which obstruct the birth canal need not necessarily be large. A tumor measuring 5 or 6 centimeters in diameter, if it arises from the cervix and is located between the leaves of the broad ligament, would be a more likely source of obstructive dystocia than would a tumor of three times the size situated in the uterine fundus. This patient is interesting, therefore, because of the unusual fact that a large intraperitoneal myoma so impinged on the pelvic inlet as to prevent engagement of the fetal head. It is usually impossible to predict before the onset of labor which, if any, of several palpable myomas may give rise to a dystocia problem. In the patient under discussion, twelve hours of labor under careful observation were permitted before non-descent of the fetal head motivated abdominal delivery. An adequate trial of labor should always be permitted before the definitive diagnosis of birth canal obstruction is made except when the obstructing tumor fills the pelvis *and cannot be displaced out of it.*

The main differential diagnosis facing the obstetrician dealing with myomas in pregnancy is that between ovarian tumor and extrauterine pregnancy. It will be noted that the roentgen evidence in the case under discussion was suggestive of an abdominal pregnancy. The clinical picture, however, did not bear out this impression. Although abdominal pregnancy is one of the more difficult obstetric diagnostic problems, its cardinal syndrome of early rupture followed by a quiescent period with ultimate recurrent signs of intraperitoneal disturbance was absent in this case. Ovarian tumors can best be differentiated from myomas when a rounded mass displacing the uterus can be palpated separate from the latter. Unfortunately, it is often impossible to make such distinction by bimanual examination. Torsion of a pedunculated subserous myoma may closely simulate the syndrome of a twisted pedunculated ovarian cyst, and often in such cases the correct diagnosis is made only at laparotomy.

Complications of the puerperium following vaginal delivery of a patient with multiple uterine myomas include postpartum hemorrhage due to uterine atony, hemorrhage from a submucous myoma (rare when the pregnancy has gone to term), and infection of degenerated myomas. Since all of these complications would be preventable by hysterectomy at the time of cesarean section, one may ask the question: should cesarean hysterectomy be done in these patients? The answer depends upon considerations which vary from one patient to another. For example, a woman with several children and large symptom-producing myomas would be a far more suitable candidate for this procedure than a woman with smaller, asymptomatic tumors who is desirous of retaining her child-bearing capacity. Many authorities, however, believe that a patient with an obstructing myoma is usually best treated by hysterectomy at the time of cesarean section. A very definite word of caution is necessary in this connection, however. The distortion produced by myomas, in combination with the altered anatomical relations of the immediately puerperal uterus, may create such technical problems as erratic displacement of the ureters. Consequently, the latter must be identified under direct vision and retracted laterally whenever question exists as to their location. If the patient had permitted, hysterectomy should probably have been done in the case under discussion, even though none of the anticipated puerperal complications occurred.

SPECIAL ARTICLES

THE SAMUEL D. GROSS SESQUICENTENNIAL

ARMAND E. COHEN, M.D.*

Introductory Note

"The elder Gross was beyond all comparison the Emperor of American Surgery and the most distinguished surgeon of his day. Such a position of distinction had never been held before and in all probability will never be held by anyone again." These were the words of Dr. John Chalmers DaCosta (1) which described Samuel David Gross, who was born near Eaton, Pennsylvania, July 8, 1805 and who died in Philadelphia May 6, 1884.

A comprehensive autobiography (2) was left by the senior Gross. It was published after his death by his sons, Samuel W. and A. Haller Gross. From this record we learn of his German ancestors who settled in Pennsylvania; of his father who died when Samuel was nine years old, and his mother who lived to be eighty-six.

Medical Training

At the age of five, Gross resolved to be a doctor. He never deviated from this idea and, at seventeen, he entered the office of a country doctor as a pupil, "To read medicine." This arrangement was promptly ended, but he had the boldness to apply to another physician only to experience again an equally unsatisfactory conclusion.

Still undaunted he made a third and slightly more successful trial at Eaton, Pennsylvania under the tutelage of Dr. Joseph K. Swift, a graduate of the University of Pennsylvania. After a short time, the young pupil's inadequate preparation was evidenced and Dr. Swift told him "To get an education first, and then study medicine." (3) Gross realistically faced the situation and determined to remedy it. He obtained his release and returned to preparatory school.

Later he returned to Dr. Swift where he was instructed in mineralogy and assigned the task of mastering the subjects of anatomy, surgery, Materia Medica, therapeutics, physiology, obstetrics, and practice of Medicine, plus private lessons in the French language. This was topped off with a limited amount of practical study of patients in the home and at the office and a weekly quiz lasting from an hour to an hour and a half. Despite the complaint of young Gross that "this was a dry and unprofitable mode of studying medicine" it ended after nearly one year by his developing a depressive neurosis and a marked impairment of physical health.

He discontinued his studies for a six week vacation and his health was completely restored. Thereafter, despite Dr. Swift's desire that he attend the University of Pennsylvania, Gross chose the new Philadelphia school—the Jefferson Medical College. This choice was greatly influenced by his admiration for Dr. George McClellon, Professor of Surgery and founder of the Jefferson School. He considered next of importance on the faculty, Dr. John Eberle, the Professor of Medicine who later taught at the Medical College of Ohio in Cincinnati and finally at Transylvania University in Lexington. Eberle was to be of importance in obtaining for Gross his first medical teaching appointment in Cincinnati.

Early Medical Career

Shortly after graduation in 1828, Gross began practice in Philadelphia. He spent his leisure time in the translation and publication of four foreign books on medicine and surgery in the hope that he might gain reputation and augment his meager income. Despite this combined effort, his finances became exhausted and he was forced to leave the city for Eaton where he began practice. While in Philadelphia Gross met and married a twenty year old widow with one child.

Dr. Gross soon acquired an active practice and, in addition, he spent several hours a day in human dissection. He likewise interested himself in research on blood coagulation, gastric and renal excretion, animal inoculation of smallpox virus, and the study of pulmonary pathology

*Assistant Professor of Medicine, Director of the Allergy Clinic, School of Medicine, University of Louisville.

following strangulation. His remaining hours of activity were spent in reading and in compilation of a descriptive anatomy. When a cholera epidemic threatened the community, the town council voted funds for him to go to New York to learn the approved treatment of the epidemic then raging in that city.

Not content with this local success Gross longed to become a teacher in anatomy. In 1833 he contacted Dr. John Eberle, his former professor of Medicine at Jefferson, then professor of Materia Medica in the Medical College of Ohio at Cincinnati. Through Eberle's efforts, Gross received the appointment of demonstrator of anatomy. After a hectic trip, Gross, his wife and two children arrived at the Queen City.

Ill fortune continued to dog him. Letters of introduction to important men were never acknowledged. Because of jealousy of the head of the Anatomy Department, he was not permitted to lecture in the regular amphitheater but instead, quarters in an attic were assigned to him. Shortly afterwards he accepted an appointment as chief of pathological anatomy in the Medical Department of the Cincinnati College. Among his colleagues at the new school was Dr. Daniel Drake, with whom he was destined to maintain the warmest personal and professional friendship until Drake's death in 1852.

Sixteen Eventful Years In Louisville

When the college was discontinued in 1839 he was not content to remain in Cincinnati. Dr. Drake, who had previously accepted the chair of pathological anatomy and clinical Medicine at the Louisville Medical Institute (University of Louisville, chartered in 1833) influenced Gross to accept an appointment in this new school. Gross had previously refused a professorship at the University of Virginia and a similar offer at the University of Louisiana. This period in his life was described by Dr. Keen (4) who stated, "In 1840 he went to the University of Louisville as professor of surgery, and excepting one year when he was professor of surgery in the University of the City of New York, he remained there for sixteen years, happy in his family, his students, his flowers, and his generous hospitality. He and his colleagues—Drake and Austin Flint—soon made it the most important center in the West, and he was in surgery the reigning soverign."

In 1841, soon after assuming his duties in Louisville, Gross set up a dog laboratory in the basement rooms of the college and instituted a series of experiments on the nature and treatment of wounds of the intestines.

In a lighter vein Gross speaks of the annoyance his dogs proved to be to some of his colleagues. "The rooms in which they were lodged became infested with fleas, which when the air became heated in the Autumn by the stoves in the college, skipped about in every direction. The Professor of Chemistry was especially molested by them, being obliged to appear before his class with his boots over his trousers to prevent them from effecting an entrance to his body." (2)

Dr. Gross was always eager to acknowledge the worth of others, both his contemporaries and those who were important historically. Besides the sketches of contemporaries found in the second volume of his autobiography, in 1861 he had edited a book entitled, "Lives of Eminent American Physicians and Surgeons of the Nineteenth Century."

In a talk to the Kentucky State Medical Association of which he was a founder, Gross was able to restore to its proper place in medical history the name of Ephraim McDowell, as the original ovariotomist and as the originator of abdominal surgery.

On his arrival in Louisville in 1840, Dr. Gross and his family made their residence at the Louisville Hotel. Shortly afterwards he established an office and residence on the east side of Fifth Street between Green (Liberty) and Walnut Streets. The 1847 directory lists his office and residence at the north side of Walnut Street between Third and Fourth.

The Medical College building, then two years old, was described "as for beauty and convenience not surpassed by any similar edifice on the continent." (7) Thirty thousand dollars had been paid for the erection of the building and $20,000 had been appropriated for the purchase of books, chemical apparatus and anatomical preparations. These latter purchases had been made in Europe by one of the faculty, Dr. Joshua B. Flint, whom Dr. Gross succeeded as professor of surgery.

Lectures started the first Monday in November and lasted until March. The dissecting rooms were opened the first of October for those who bought their "ticket" early. Without additional charge,

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EDITORIALS

RURAL SCHOLARSHIP FUND NEEDS REPLENISHING

In his report to the House of Delegates this year, Dr. C. C. Howard indicated that the money in hand of the Rural Kentucky Medical Scholarship Fund will approach depletion with the loans scheduled for this year. His report in the July issue of this Journal detailed the accomplishments of this fund to date. If these benefits to deserving medical students and, in turn, to our rural communities are to continue or be enlarged, there must be more rural scholarships established. Money has not been returned from the original loans in amounts expected.

Dr. Howard writes:

"It is difficult to anticipate with any accuracy the amount that will be collected in time to finance loans for the 1956-57 school year. It is obvious, however, that unless additional funds become available from some source before the beginning of the 1956-57 school year it will be necessary to sharply curtail the program."

We should not forget the necessity of replenishing this fund with our own contribution or by solicitation of interest in it by individuals and industries who may be able and inclined to help so worthy an undertaking.

Sam A. Overstreet, M. D.

LOUISVILLE, LEXINGTON OR BOTH?

Despite the present dearth of A-Grade applicants, we need to strive by every means possible to improve the quality, as well as the capacity, for medical education in Kentucky. Early this year, Dean Kinsman announced the intention of the School of Medicine of the University of Louisville to accept 124 freshmen a year. The present enrollment in the freshmen class is less than 100—due to the fact that an insufficient number of well qualified Kentucky applicants were received to bring the class to the capacity indicated. This should not be true of the admission class of 1956. There can be, and should be, 124 applicants from this state whose qualifications are sufficiently good to admit them to the freshmen class.

Active recruitment of promising men for medicine has not been practiced during the past few years, because it has not been necessary. There are, however, in every community, men of high scholarship now in college who, with a very little word of encouragement and, in some instances, the assurance of financial assistance, would be eager to enter the medical profession. This recruitment can best be accomplished by the physician in practice who has a personal and intimate acquaintance with the prospective medical student and with his family, and who knows something of his intellectual and financial capabilities. A visit by a representative of the School of Medicine's Committee on Admissions to our colleges yearly to address the pre-medic students will not be sufficient as a contact and source of encouragement. A physician known to the student and respected by him could be far more effective.

Every effort possible, within the rather stringent present financial limitation, is being made by the President of the University of Louisville and the Dean of the School of Medicine, and all others concerned, to improve the quality of medical education at that institution and to expand the physical facilities in order to accommodate a greater number of students. While this effort has been in progress for several years, it appears more nearly possible of realization now than ever before. There is a renewed enthusiasm in the City of Louisville to establish a medical center, which will be a credit to our city and to the State of Kentucky, and will be on a par with other medical centers in cities of our size. The plans for this medical center include buildings and increased capacity for the school of medicine.

Louisville is the largest city in the State and more easily accessible from all parts of the State than any other. There are

many who believe that if the state is to erect a new hospital for the care of the more difficult diagnostic and treatment problems of private and indigent patients throughout the state, the expanding medical center in Louisville is the logical location for its establishment. Clinical material thus accumulated for more intensive study and care could furnish tremendous strengthening to the process of medical education in the University of Louisville School of Medicine.

Entirely apart from this plan, though not necessarily in opposition, is the present effort of the Kentucky Medical Foundation to stimulate interest in the establishment of a new medical school in Lexington. Additional clinical facilities will be necessary before a medical school of the first grade can be established there. The Foundation, therefore, envisions erection of a state hospital, with a capacity of 300 to 500 patients, in Lexington. To this hospital would be brought the more difficult medical problems, both private and indigent, from over the entire state.

Under the very capable leadership of Mr. J. Stephen Watkin, the Kentucky Medical Foundation has been active during the past year. A campaign has been launched to inform the people of Kentucky regarding the urgent necessity of better medical care. A part of the proposed expansion of medical care is the establishment of such a hospital and medical school in connection with the University of Kentucky. This school has already been authorized by the University's Board of Trustees. The effort now being expended is to influence the present state legislators and those to be elected this fall, to the end that the establishment of a medical school in Lexington will be authorized by the 1956 Kentucky Legislature.

There are those in our profession who heartily endorse the objectives and operation of the Kentucky Medical Foundation. There are, perhaps, an equal number who feel that the time is not ripe for the establishment of a medical school in Lexington, and that the improvement and expansion of the facilities at the University of Louisville can be accomplished more quickly, at a great deal less cost, and will satisfy the needs of medical education in this state for the next ten or twenty years.

It is for us to decide whether the combination of funds contributed by private enterprise, that required of the state and collected in taxes and what aid may be received from the Federal Government, will impose a financial load of construction and operation which the State, at present, is not able to undertake. That will be decided by the Legislature. Now is the time, however, for physicians to use their influence for or against the proposal.

Should a new medical school be established at Lexington, what effect will it have upon the future of the School of Medicine of the University of Louisville? Will it result in the withdrawal of what financial aid is at present being received by that institution from the State, or will the present financial aid be continued and increased in proportion to the number of Kentucky students who are to receive their medical education in the University of Louisville? No one knows the answer to that question, nor can it be predicted very accurately. In many states the establishment of a school owned and operated by the state, has not interferred with the financial aid to medical education given by the State to private institutions carrying on the same work. We would hope that this would be the case in Kentucky.

It is hardly conceivable that the establishment of a new medical school in Lexington would very seriously cripple the operation of the school of medicine at the University of Louisville. It may result in holding the classes to the present number of about 100—and, in some respects, that would be desirable. It would undoubtedly result in a smaller percentage of the medical student body coming from Kentucky, because the majority of them would probably avail themselves of the new facilities at the University of Kentucky.

It would probably result in a much larger percentage of our students coming from outside the state, and the return of the school to its cosmopolitan character of a few years ago. If a larger percentage of students are drawn to this school from outside the State, it is reasonable to expect that a fair percentage of them will eventually stay in this part of the country to carry on their medical practice. It is reasonable to speculate that such a situation might well bring a sufficient number of practicing physicians from outside our borders into the state to make an appreciable difference and help to alleviate the scarcity of physicians in rural areas.

Whether our improvement and expansion of medical education is to be confined to Louisville, or supplemented by an expansion at Lexington, it appears that the people of our State are bound to win. Whether we exert our efforts and influence toward one project or the other, or both, we will render our State a timely service.

SAM A. OVERSTREET, M. D.

ORGANIZATION SECTION

Richard Slucher, M.D., Named KSMA President Elect

Richard R. Slucher, M. D., Buechel, former vice chairman of the Council, was elected KSMA president elect at the 1955 Annual Meeting Wednesday September 28, in Louisville.

Dr. Slucher, who was born near Frankfort, graduated from the University of Louisville Medical School in 1930. He interned and took his residency at the Louisville City Hospital.

Dr. Slucher

A Council member from the fifth district for the past six years, Dr. Slucher is the past president of the Jefferson County Medical Society, and is now chairman of the executive committee of the Jefferson County Medical Society. He was the first president of the Kentucky Chapter of General Practice and in 1949 was staff president of the Baptist Hospital in Louisville.

In addition to his other contributions to organized medicine, Dr. Slucher served three years on the executive committee of the KSMA council.

Everett Baker, M. D., Louisville (Eastern); Nathaniel Bosworth, M. D., Lexington (Central); and Howell J. Davis, M.D., Owensboro (Western) were chosen vice presidents of KSMA.

KSMA Members Asked Opinions on Hospital Accreditation

KSMA members have been asked to express their views relative to functions and operations of the Joint Commission of Accreditation of Hospitals, Francis Massie, M. D., Lexington, Chairman of the KSMA Committee on Hospitals, announced.

Dr. Massie explained that the request is a follow-up of the June 1955 decision of the AMA House of Delegates to appoint a committee "to review the functions of the Joint Commission on Accreditation of Hospitals. . ." and ".. . . to make an independent study or survey and report its findings and recommendations to the House of Delegates at the next annual meeting."

The Committee is interested especially in receiving answers concerning the following:

1. The general understanding by physicians of the functions of the Joint Commission.

2. Whether the method of appeal from an adverse ruling regarding accreditation is satisfactory.

3. The effect on the individual physician's hospital connections due to actions of the Joint Commission.

4. Whether any organizations not now represented should have official representation on the Joint Commission.

5. The effect of the Joint Commission's requirements concerning such matters as staff meetings.

6. The pros and cons of separating administrative and professional accreditation functions in the inspection of hospitals.

7. Constructive suggestions for improving the hospital accreditation program.

Physicians and county societies were urged by Dr. Massie to pass on their comments concerning the Joint Commission on Accreditation of Hospitals to:

W. C. Stover, M. D., Chairman, Committee to Review Functions of Joint Commission on Accreditation of Hospitals, 535 North Dearborn Street, Chicago 10, Illinois.

Member Attendance Record Set at '55 KSMA Sessions

The Attendance record for members at the 1955 KSMA Annual Meeting was broken as 938 members attended the three day session. Last year 924 members were registered.

A total of 1,166 physicians registered at the 1955 meeting. One thousand eight hundred sixty five persons, in all classifications, attended the sessions. This last figure does not include the 216 members of the Woman's Auxiliary who registered and met at the Brown hotel.

Retiring president Clyde C. Sparks, M. D., and other KSMA officials said that they had never seen better attendance at the scientific sessions or more interest shown in the topics discussed.

Attendance at both the scientific and technical exhibits was good.

Registration figures by classification are as follows:

Members	938
Guests Physicians	122
Guests	121
Exhibitors	174
Interns-Residents	106
Registered Nurses	55
Medical Students	299
Technicians, office assistants, etc.	50
	1,938

Radio, TV Stations Give PS Time to Annual Meeting Speakers

State radio and television stations contributed approximately eight hours of public service time for broadcasts of health matters given by guests and local speakers of the 1955 KSMA Annual Meeting. The programs, arranged by the Headquarters Office, took the form of panel discussions and interviews.

Clyde C. Sparks, M. D., retiring president, and the members of the House of Delegates expressed their thanks to the radio and television stations and to the guest and local speakers for their contributions. The four Louisville radio stations participating were WHAS, WINN, WKLO, AND WAVE. The television stations were WAVE-TV and WHAS-TV.

"The Second Annual Radio Report on the KSMA Meeting," a half hour transcription prepared by WAVE was broadcast on seven stations throughout the state. They are: WKYB, Paducah; WVJS, Owensboro; WKCT, Bowling Green; WVLK, Lexington; WZIP, Covington; WCMI, Ashland; and WCPT, Corbin.

Color Television Has Big Appeal at 1955 Annual Meeting

The eight hours of closed circuit color television produced by the Louisville General Hospital and sponsored by Smith, Kline and French Laboratories, which was presented at the 1955 Annual Meeting of the KSMA, was one of the biggest attractions of the entire meeting, according to Clyde C. Sparks, M. D., retiring president.

Mr. Sparks expressed his thanks and gratitude to Smith, Kline and French for the preparation and technical quality of the presentations and to Rudolph J. Noer, M. D., and his committee for the value and selection of the material which was televised. Others on the Television Committee were Garnett Sweeney, M. D., Liberty; J. C. Bell, M. D., Louisville; Rankin Blount, M. D., Lexington; J. C. Drye, M. D., Louisville; and Lawrence T. Minish, M. D., Lexington.

The television programs, which originated at General Hospital, were shown in the main auditorium at Columbia Auditorium on the four and one half by six foot screen. The auditorium, during all the sessions of the color television, was filled, forcing many of the late spectators to find seats in the balcony.

The programs, each concerning medical and scientific subjects of great importance and value to the physician, were rehearsed a minimum of three times before going on the air.

J. Vernon Pace, M. D., Elected Chairman of KSMA Council

James Vernon Pace, M. D., Paducah, councilor from the first district, was elected chairman of the KSMA Council, Sept. 28 at the Reorganization Meeting during the 1955 annual session in Louisville.

Dr. Pace, a native Kentuckian, was graduated from Vanderbilt University School of Medicine in 1921. He has been a councilor from the first district since 1948. In 1952 he served on the five man committee appointed by the Governor to study facilities for Medical Education in Kentucky.

Dr. Pace

Dr. Pace is a member of the Southeastern Surgical Congress and the American College of Surgeons.

Delmas M. Clardy, M. D., councilor from the third district, was elected vice chairman of the council to succeed Richard Slucher, M. D. Dr. Clardy has served as chairman of the KSMA budget committee and has long been active in KSMA affairs.

Carlisle Morse, M. D., Louisville, was elected councilor of the fifth district to fill the vacancy left by Dr. Slucher who was elected president elect. Dr. Morse has served as chairman of the KSMA committee on Diabetes since 1951.

Five other councilors whose terms expired this year were re-elected. They are: Walter O'Nan, M. D., Henderson (Second District) Branham B. Baughman, M. D., Frankfort (Seventh Ditstrict); J. M. Stevenson, M. D., Brookville. (Ninth District) and J. Farra Van Meter, M. D., Lexington, (Tenth District) and Charles Johnson, M. D., Russell, (Thirteenth District).

Dr. Lukins, Dr. Miller Honored at 1955 Annual Meeting

J. B. Lukins, M.D., Louisville, and A. O. Miller, M. D., Scottsville, were honored at the opening of the 1955 Annual Meeting at Columbia Auditorium Sept. 26. Dr. Lukins received the KSMA's annual Distinguished Service Award. Dr. Miller was named the Outstanding General Practitioner of the year.

Dr. Lukins, a native of Flemingsburg, was president of KSMA in 1936. He was awarded the E. M. Howard Award for outstanding achievement about five years ago. Dr. Lukins limits his practice to gynecological surgery.

A graduate of the University of Louisville Medical School, Dr. Lukins was a part time faculty member of the school for 40 years. He interned at General Hospital and began practice in 1907.

Dr. Lukins, a former vice president of the Southeastern Surgical Congress, has been chairman of the KSMA medical legal committee for 31 years. He has served as delegate to the AMA and is now a member of the AMA's judicial council.

Dr. Miller, 71, a general practitioner for 43 years, was graduated from the University of Louisville Medical School in 1911. He began practice in Petroleum. In 1927 he moved to Scottsville.

Dr. Miller, a member of the Allen County Board of Health since 1913, is now its president. He is also president of the Allen County Medical Society.

He has been a member of the KSMA and AMA for 40 years. By winning this award, Dr. Miller automatically becomes Kentucky's candidate for the AMA's annual general practitioner award.

A. O. Miller, M. D., Scottsville, left, was named the KSMA Outstanding General Practitioner for 1955 by the House of Delegates Monday, Sept. 26. He is shown here with Clyde C. Sparks, M. D., Ashland, who presented the award.

Clyde C. Sparks, M. D., retiring KSMA president, presents the KSMA's Distinguished Service Medal to J. B. Lukins, M. D., Louisville at the Annual Meeting in Louisville, Sept. 29, 1955.

Council Appointed '56 Committees Announced at Annual Meeting

Committees appointed by the Council for 1956 were announced after the annual reorganization meeting, Thursday, Sept. 29.

As a result of a by-law change voted by the house of Delegates the night before, the Educational Campaign Committee and the Public Relations Committee were combined. The title of the new committee is the Committee on Public Information and Service.

Other by-law changes abandoned the Medical-Legal Committee and called for election by council of the Medical-Legal administrators. The executive committee will act in the advisory capacity to the administrators. The committees are:

Legislative Committee

Branham B. Baughman, M. D. Frankfort, Co-chairman
J. Farra Van Meter, M. D., Lexington, Co-chairman
Norman Adair, M. D., Covington
Rufus Alley, M. D., Lexington
John Archer, M. D., Prestonsburg
Guy Aud, M. D., Louisville
Clark Bailey, M. D., Harlan
Daniel Bower, M. D., Williamsburg
William H. Cartmell, M.D., Maysville

Gant Gaither, M. D., Hopkinsville
Thomas Gudex, M. D., Louisville
Orion L. Higdon, M. D., Paducah
Francis Hodges, M. D., Pikeville
C. C. Howard, M. D., Glasgow
E. W. Jackson, M. D. Paducah
Billy K. Keller, M. D., Louisville
Clyde Sparks, M. D., Ashland
Charles B. Stacey, M. D., Pineville
Charles B. Wathen, M. D., Owensboro

Committee on Medical Service

G. L. Simpson, M.D., Greenville, Chairman
Guy Cunningham, M. D., Ashland
J. P. Glenn, M.D., Russellville
Robert Hoffman, M. D., South Ft. Mitchell
Robertson O. Joplin, M. D., Louisville
W. H. Rush, M. D., Frankfort
Cy Waldrop, M. D., Williamstown

Committee On Public Information and Service

Richard G. Elliott, M. D., Lexington, Chairman
Joe Bush, M. D., Mt. Sterling
David Cox, M. D., Louisville
Mitchell Denham, M. D., Maysville
Wendell V. Lyon, M. D., Ashland
George Pedigo, M. D., Louisville
Charles Stacy, M. D., Pineville

Medical-Legal Administrator

John D. Gordinier, M. D., Louisville

Advisory Committee to the Editor

Guy Aud, M. D., Louisville, Chairman
James E. Hix, M. D., Owensboro
Richard J. Rust, M. D., Newport

Harry C. Denham, M.D., Appointed to U of K Board of Trustees

Harry C. Denham, M. D., 38, Maysville physician and surgeon, has been appointed by Governor Lawrence Wetherby as a trustee of the University of Kentucky. Dr. Denham's tenure on the board will last through December 31, 1957.

A native of Vanceburg, he is now president of the Hayswood Hospital medical staff. Dr. Denham has been associated in practice with his brother, M. B. Denham, M. D., for the last six years.

Dr. Denham received his medical degree from the University of Louisville School of Medicine in 1944. He served his internship and two years in surgical residency at Louisville General Hospital. During World War II, Dr. Denham served in the medical corps of the United States Army.

Dr. Hess and Dr. Smith Speak at President's Luncheon

Three hundred and four physicians and their guests attended the Annual 1955 President's Luncheon at the Brown Hotel, Wednesday, September 28. Clyde C. Sparks, M. D., retiring president, presided.

The two featured speakers were Elmer Hess, M. D., President of the AMA, and Austin Smith, M. D., editor of the Journal of the AMA.

Dr. Hess, speaking with his glasses pushed to his forehead, called the physicians the most respected men in their communities. "The average patient, whether you know it or not worships you," he said.

Elmer Hess, M. D., president of the AMA, and guest speaker at the President's Luncheon tells the physicians at the annual event that they are the most respected men in their communities.

He told the group that the mark of a fine physician is not his knowledge of science although he needs a great knowledge, but that he be "an understanding human being." He stressed the need of a strong spiritual side to a physician's life.

Dr. Smith, who recently returned from Vienna, Austria, told the physicians they had made patients live too long, "our lives are being extended too long and too quickly for the medical facilities and social facilities we have available." Dr. Smith added however, that he didn't recommend that the life lengthening efforts cease.

AMA's Annual Clinical Meeting Planned for Nov. 29-Dec. 2

Kentucky physicians and their wives planning to attend the AMA's ninth annual Clinical Meeting November 29 to December 2 in Boston have a well rounded program scheduled for them.

A scientific program covering all phases of medicine including lectures, round table discussions, color television and motion picture films has been arranged. Scientific and technical exhibitions will feature the latest information, equipment, books, and pharmaceuticals for today's physician.

The Scientific and Technical Exhibits will be held in the Mechanics Building. The House of Delegates will meet at the Statler Hotel.

Dr. Pierce Elected President of Ky. Surgeon's Group

Vinson Pierce, M. D., Covington, was elected president of the Kentucky Chapter of the American College of Surgeons at the Annual Meeting Sept. 26.

Other officers elected were Arnold Griswold, M. D., Louisville, vice president, and R. W. Robertson, M. D., Paducah, councilor. James Drye, M.D., Louisville, was re-elected secretary.

Scientific speakers at the meeting were Carl Badgley, M. D., of the University of Michigan; Thomas Burford, M. D. of Washington University, St. Louis; Edward Jahnke, M. D. of Walter Reed Medical Center; Francis Murphy M. D. of Memphis, Tennessee, and William Haley M. D. and R. W. Robertson M. D. of Paducah.

An annual award given for the best essay written by a Kentucky resident in surgery was presented to Sam D. Weekly, M. D. and Crocker Clagg, M. D. for their essay, "Diagnostic Value of Paracentesis in Acute Abdomen."

Mental Illness, Health Commission Incorporated in August

A Joint Commission on Mental Illness and Health has been organized to carry out the provisions of the Mental Health Study Act of 1955, which calls for "analysis and re-evaluation of the human and economic problems of mental illness" to be carried out by one or more qualified non-governmental organizations, Dr. Leo H. Bartemeier, Baltimore psychiatrist and chairman of the trustees of the new organization has announced.

The Act authorizes appropriations of $1,250,000 over three years, of which $250,000 has been appropriated for the first year. The money is assigned to the Surgeon General

Woman's Auxiliary leaders look over their program at the Brown Hotel where they held their 1955 annual meeting, Sept. 27-29. They are: Mrs. Robert Flanders, Manchester, N. H., president elect, Woman's Auxiliary to the AMA; Mrs. Karl D. Winter, Louisville, retiring KSMA president; Mrs. R. Ward Bushart, Fulton, incoming president; and Mrs. John W. Bailey, Wheelwright, past president (1950) of KSMA, now vice president of Woman's Auxiliary to the AMA.

Above is a section of the north speakers table at the 1955 President's Luncheon, Wednesday, Sept. 28, 1955.

Talking over the annual Meeting before the President's Luncheon Wednesday, Sept. 28 at the Brown Hotel in Louisville are: (l to r) Mr. Philip Davidson, Louisville, President of the University of Louisville; Mr. Lew Lang, of Smith, Kline and French Laboratories, sponsors of the colored television at the meeting; J. D. Hancock, M.D., Louisville, 1953-54 KSMA president; and Cylde C. Sparks, M. D., Ashland, retiring KSMA president.

of the U. S. Public Health Service, who may grant it to non-governmental organizations to carry out the study.

The joint commission, which is comprised of representatives of the leading national organizations and agencies that have a primary interest in the mental health field, was incorporated in August by a small group of representatives of the American Association of Psychiatric Social Workers, American Hospital Association, American Medical Association, American Nurses Association, National League for Nursing, American Psychiatric Association, American Psychological Association, and the National Education Association. The first meeting was held October 8.

Delegates Act on 84 Issues During Lengthy Session

In one of the longest sessions in recent years the House of Delegates in the 1955 Annual Meeting acted on 64 officers and committee reports, 17 resolutions, and three special recommendations.

Matters considered by the House ranged from the Corporate Practice of Medicine to important changes in the Constitution and by-laws. The detailed digest of the matters discussed by the House is scheduled to appear in the December Journal.

Two resolutions were presented covering the operations of the joint commission on Hospital Accreditation. One of these resolutions called on the KSMA to "go on record as vigorously opposing the present system of methods of operation and standards of the Joint Commission on Accreditation of Hospitals.

The resolution included the request that the Kentucky delegate to the AMA present the resolution to the national organization and press for its passage.

Another resolution passed by the House expressed "opposition to the policy of JCHA regarding the number of courtesy staff memberships in the private hospitals" and asked the KSMA delegate to AMA to carry the matter to the floor of that body.

The House also expressed strong interest in the subject of Corporate Practice of Medicine. In one action they asked KSMA to appoint a committee "to define completely and concisely within the Constitution the Corporate Practice of Medicine and urged a report of the Committee be made to the Council in the 1956 session "in order to allow them to formulate the policy governing the complete practice of Medicine.

They also adopted the recommendation of presenting a report calling on the House of Delegates "to request the legal inforcing agency of the Medical Practice Act to secure an opinion from the Attorney General as to whether hospitals charging for services of radiologists, pathologists and other licensed practitioners of medicine are acting within the law."

The Women's Auxiliary was highly commended for its useful and diversified program by the House of Delegates.

Words of praise were had for the monthly news letter and "news caps" and request was made that the amount of material in them be expanded.

The House commended the Committee on Medical Service for its fine work in conducting the study on indigent medical care and endorsed the recommendations of the committee which had been approved by the Council.

Three resolutions and a special recommendation covering the distribution of Salk polio vaccine were acted upon by the governing body, as it sustained the original recommendation of the KSMA Council.

The 15 councilors of the KSMA were recognized and praised by Clyde C. Sparks, M. D., retiring president of the KSMA, at the President's Luncheon on the Roof Garden of the Brown Hotel, Sept. 28. Dr. Sparks highly complimented the faithful and efficient service rendered to the association by these councilors.

Kentucky Physicians to Take Part in SMA's Annual Meeting

Eleven Kentucky physicians will take part in the 49th annual meeting of the Southern Medical Association, November 14-17 at Houston, Texas.

Nine of this number will present papers at the meeting. The physicians and the titles of their papers are: "Functional Fixation of Intracapsular Fracture of the Hip", by William K. Massie, M. D., Lexington; "The Medical Rehabilitation Board and/or Evaluation Clinic are Essential for Early Rehabilitation and Successful Placement," by Israel Muss, M. D., Louisville; "Surgical Treatment of Ulcerative Colitis; Problems of the Ileostomy," by William H. Hagan, M. D. and Hart Hagan, M. D., Louisville.

Other Kentucky speakers and the papers they'll present are: "Clinical Study of the Rh Factor," by Carroll L. Witten, Louisville; "Examination of the Gastrointestinal Tract in Children Using Soluble Non-Absorbable Opaques," by Lawrence A. Davis, M. D., Louisville; "Practical Aspects of Urinary Tract Calculus Formation and Prevention: A Review of 200 Successive Cases," by L. Douglas Atherton M. D., and Lytle Atherton, M. D., Louisville; and "Aspergilloma" by John Harter, M. D., Louisville.

Two Kentucky physicians will take part in the discussion during the Section on Urology. They are Douglas E. Scott, M. D., of Lexington and Robert Lich, Jr., M. D., of Louisville.

Gant Gaither, M. D., Hopkinsville, incoming KSMA president, presents the Past President's Key to Clyde C. Sparks, M. D., Ashland, retiring KSMA president, at the 1955 Annual Meeting Sept. 29, at the Columbia Auditorium in Louisville.

65 Technical Exhibits Displayed At 1955 Annual Meeting

Sixty five technical exhibitors, the largest number ever to patronize a Kentucky meeting displayed the latest developments in drugs, services, equipment and literature at the 1955 Annual Meeting.

W. O. Johnson, M. D., Chairman of the Committee on Technical Exhibits praised the exhibitors highly for their attractive booths, the value of the medical information presented and for their financial support of the meeting.

The exhibitors were:

Abbott Laboratories
A. S. Aloe Company
Ames Company, Inc.
Audio-Digest Foundation
Ayerst Laboratories
The Baker Laboratories, Inc.
Blue Cross Hospital Plan, Inc.
The Borden Company
Burroughs Wellcome & Co.
Burton, Parsons & Co.
Carroll Dunham Smith Pharmacal Co.
The Central Pharmacal Co.
Chicago Pharmacal Co.
Ciba Pharmaceutical Products
The Coca-Cola Company
Crocker-Fels Company
Dick X-Ray Company
Doho Chemical Corporation
Eaton Laboratories
H. G. Fischer & Co.
C. B. Fleet Co., Inc.
General Electric Co.—X-Ray Division (two booths)
Guild of Prescription Opticians of Ky.
John Hancock Life Ins. Co.
Hoffman-LaRoche, Inc.
Holland Rantos Co., Inc.
Kay Surgical, Inc.
Lederle Laboratories Division, American Cyanamid Co.
Eli Lilly and Co.
J. B. Lippincott Co.
Logan Co. (Sealy Mattress)
McNeil Laboratories, Inc.
J. A. Majors Co.
Maltbie Laboratories
M & R Laboratories, Inc.
The S. E. Massengill Co.
Mead Johnson, & Co.
Medical Aids, Inc.
The Medical Protective Co.
William S. Merrell Co.
Miller Surgical Co.
The C. V. Mosby Co.
Ortho Pharmaceutical Corp.

Parke, Davis & Co.
Pfizer Laboratories
Picker X-Ray Corporation
R. J. Reynolds Tobacco Co.
A. H. Robins Co., Inc.
Sanborn Company
Sandoz Pharmaceuticals
Schering Corporation
G. D. Searle and Co.
Sharp & Dohme
Smith, Kline & French Labs
E. R. Squibb & Son
Theodore Tafel Co.
Templar-Thelan X-Ray Co.
Tru-Fit Surgical Appliance Co.
The Upjohn Company
U. S. Vitamin Corporation
White Laboratories, Inc.
Winthrop-Stearns, Inc.
The Max Wocher & Son Co.
Zimmer Manufacturing Co.

Andrews Named to U of L Staff

Kenneth R. Andrews, M. D., Lexington allergy specialist, has been appointed to the staff of the University of Louisville School of Medicine as instructor of medicine, according to published reports. Dr. Andrews, a member of the American College of Allergists, will give lectures on allergic diseases at the university. He will continue his practice in Lexington.

Dr. Andrews, a graduate of the Vanderbilt University School of Medicine, served as an intern and resident of the St. Louis University Medical School Hospital Group.

Austin Smith, M. D., Editor of the Journal of the AMA, spoke briefly to physicians at the Annual President's Luncheon at the Brown Hotel Wednesday, Sept. 28.

Gant Gaither, M. D., Hopkinsville, incoming president of the KSMA, takes the oath of office from Branham B. Baughman, M. D., Frankfort, chairman of the Council at the Annual Meeting Thursday, Sept. 29.

American College of Surgeons Announce Meeting Dates

The meeting places for the 1956 six sectional meetings of the American College of Surgeons were recently released in a news bulletin from the College of Surgeons Headquarters in Chicago.

The cities and dates of the meetings are: Jacksonville, Florida, Jan. 16-18; Philadelphia, Pennsylvania, Feb. 13-16; Milwaukee, Wisconsin, Feb. 27-29; Colorado Springs, Colorado, March 5-7; Little Rock, Arkansas, March, 12-13; and Edmonton, Alberta, April 23-25.

Kentucky physicians wishing further information may write to Dr. H. Prather Saunders, Associate Director, American College of Surgeons, 40 East Erie St., Chicago 11, Illinois.

Los Angeles Medical Convention Scheduled January 3-5

The Los Angeles Midwinter Medical Convention, scheduled for January 3-5, 1956, will emphasize coordinated discussions on major developments. in many phases of medical science. according to a news release of the LACMA.

The program has been planned to coordinate the newest and most significant information in six fields of medicine. They are: Preventive Medicine, Geriatrics, Atomic Medicine, Blood and Blood Products, Neoplastic Diseases, and Chemotherapy.

KSMA physicians planning to attend the convention will be interested in knowing that they may combine the post graduate medical education with attendance at the Rose Bowl Football game on January 2.

Louisville Law-Science Foundation Plans Seminar, November 21

The Lousville Law-Science Foundation Inc., a non-profit organization composed of members of the Louisville Bar Association and the Jefferson County Medical Society will hold its second seminar Nov. 21, in Louisville at the Kentucky Hotel, according to Arnold Griswold, M. D., Louisville, chairman of the Foundation.

The seminar, a one day affair, will begin at 9:15 a.m. with a criminal law workshop. Following the workshop, a program on forensic medicine entitled "Medical Science As a Aid to Justice" will be held. This program will cover such topics as signs of criminal violence and toxicology.

The afternoon program will feature a workman's compensation seminar and discussions on industrial and compensating medicine covering such topics as air borne diseases, fumes, gases, and dust. A panel discussion on rehabilitation and disability ratings will be held. There are no registration fees for the day long seminar and all attorneys and physicians are invited.

At the close of the seminar the Jefferson County Medical Society will hold its regular monthly meeting jointly with the Louisville Bar Association. A one hour program will be presented by the attorneys for the medical society members and guests.

Dr. Dean Heads EENT Society

Wynant W. Dean, M. D., Louisville, was recently elected president of the Kentucky Chapter of the Eye, Ear, Nose, and Throat Society. Other officers elected were: William O. Preston, M. D., Lexington, vice president; Buerk Zimmerman, M. D., Louisville, secretary; and Arthur H. Keeney, M. D., Louisville, treasurer.

Dr. Morse Reappointed to ADA

Carlisle Morse, M. D., Louisville, has been reappointed to membership on the national committee on detection and education of the American Diabetes Association, according to H. T. Ricketts, M. D., president of the association.

Dr. Morse, governor of the ADA for Kentucky, has served as chairman of the KSMA diabetes committee for several years. A graduate of the University of Louisville Medical School, he is now Assisting Professor of Medicine there.

D. Lane Tynes, Executive director of Blue-Cross and Blue Shield in Kentucky presents a certificate to Mr. A. E. King of Webster as the 50,000 member of the Farm Bureau in Kentucky. Mrs. King looks on.

U of K Gets Reynold's Library

The medical library of the late Charles Waugh Reynolds, M. D., the man to give the first successful diphtheria antitoxin in 1894, was recently given to the University of Kentucky, according to published reports. The collection contained documents dated from 1800, original publications and autographed volumes of famous persons. Dr. Reynolds died August 9, 1954.

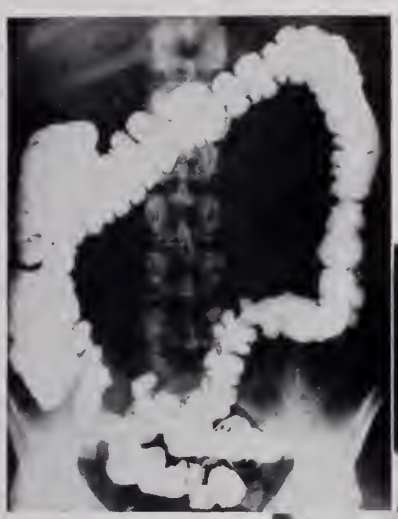
Some of the medical books from the collection have been given to St. Elizabeth and Booth Hospitals in Covington. Dr. Reynold's instruments have been given to the Kenton County Tuberculosis Sanatorium.

KSMA Adds 16 New Members

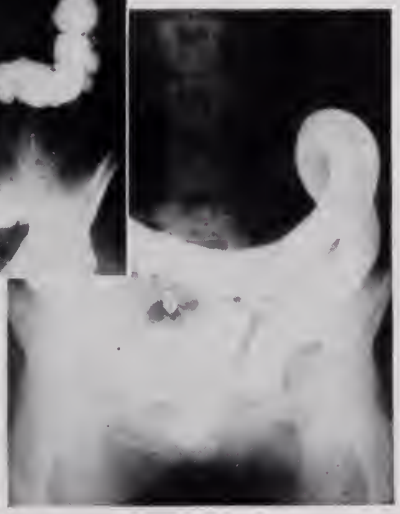
Sixteen physicians recently were added to the KSMA roster. They are:

D. C. Bennett, M. D., Beaver Dam
Richard M. Brandon, M. D., Owensboro
W. H. Cave, M. D., Henderson
C. A. Crabtree, M. D., Gamaliel
Kenneth De Simone, Campbellsville
Lucy G. De Simone Campbellsville
Audrey L. Embry, M. D., Millwood
Stuart Graves, M. D., Louisville
Albert Joslin, M. D., Beaver Dam
Willard A. Litzenberger, M. D., Elizabethtown.
George McCrocklin, M. D., Louisville
Harold L. McPheeters, M. D., Louisville
John A. Petry, M. D., Fern Creek
William F. Rubel, M. D., Louisville
Louis Sonne M. D., Louisville
Hugh C. Williams, M. D., Carrollton

METAMUCIL® IN CONSTIPATION



Normal Colon



Ulcerative Colitis

Atonic Colon

Smoothage in Correction of Colon Stasis

To initiate the normal defecation reflex, the "smoothage" and bulk of Metamucil provide the needed gentle rectal distention.

Once the habit of constipation has been established, due to any of a large number of causes, it becomes a major problem. Self-medication with irritant or chemical laxatives, or repeated enemas, usually causes a decreased, sluggish defecation reflex and may result in its complete loss.

Rectal distention is a vital factor in initiating the normal defecation reflex, and sufficient bulk is thus of obvious importance in restoring this reflex. Metamucil provides this bulk in the form of a smooth, nonirritating, soft, hydrophilic colloid which gently distends the rectum and initiates the desire to evacuate. Metamucil demands extra fluid, imparting even greater smoothage to the intestinal contents.

It is indicated in chronic constipation of various types—including distal colon stasis of the "irritable colon" syndrome, the atonic colon following abdominal operations, repressions of defecation after anorectal surgery and in special conditions such as the management of a permanent ileostomy. Metamucil is the highly refined mucilloid of Plantago ovata (50%), a seed of the psyllium group, combined with dextrose (50%) as a dispersing agent.

The average adult dose is one rounded teaspoonful of Metamucil powder in a glass of cool water, milk or fruit juice, followed by an additional glass of fluid if indicated.

Metamucil is supplied in containers of 4, 8 and 16 ounces. G. D. Searle & Co., Research in the Service of Medicine.

SEARLE

R. H. Conference Set for March

The eleventh National Conference on Rural Health will be held at the Multnomah Hotel, Portland, Oregon, March 8-10, according to a report from the AMA. The theme will be "Your Doctor and You."

Wyatt Norvell, M. D., New Castle, chairman of the KSMA committee on Rural Health, announced recently that the 1957 national rural health conference will be held at the Brown Hotel in Louisville.

Ky. Rheumatism Society Meets

A reorganization meeting of the Kentucky Chapter of the American Rheumatism Association was held Sept. 29, at the Columbia Auditorium.

New officers elected for the coming year are: David H. Neustadt, M. D., Louisville, president; F. Albert Olash, M. D., Louisville, vice president; and Martin H. Boldt, M. D., Louisville, secretary-treasurer.

'56 Nominating Committee Elected

Five physicians were elected to serve on the Nominating Committee for the 1956 Annual Meeting at the second meeting of the House of Delegates at the 1955 Annual Meeting Wednesday night, Sept. 28.

The physicians elected were: W. B. Atkinson M. D., Campbellsville; Howell J. Davis, M. D., Owensboro; Thomas J. Gilbert, M. D., Bowling Green; John S. Harter, M. D., Louisville; and H. B. Stone, M. D., Hopkinsville.

T-V Show on Baby Care Scheduled

"It's Baby Time," a filmed television show on infant care was started the week of October 16, according to word from the AMA. W. W. Bauer, M. D., Director of the AMA's Bureau of Health Education will act as medical narrator and Jane Warren, R. N., will demonstrate nursing procedures.

Kentucky physicians can see the television show on and after Thursday, October 20 on WHAS-TV (Channel 11-CBS) from 12:00 to 12:15 DST and 1:00 to 1:15 ATC.

SAMUEL D. GROSS SESQUICENTENNIAL

(Continued from page 982)

students were admitted to the wards of the Louisville Marine Hospital built in 1823 by the State of Kentucky.

Dr. Gross did his private surgery at the St. Joseph Hospital which opened November 20, 1836 under the name of St. Vincents Infirmary and was housed in an orphanage of the same name on Jefferson Street. In 1853, operations were continued in a rented building on the west side of Fourth Street between Chestnut and Broadway.

Rodman (8) has written of the life of Dr. Gross in Louisville. He felt that Daniel Drake must have been greatly impressed by Gross, a comparatively unknown surgeon, to recommend him for "the important chair of Surgery in the foremost institute west of the Alleghenies and at that time certainly the equal of any east of them, required as he was to stand alongside of such colleagues as Caldwell, Cooke, Drake, Short and Yandell, all of whom were men of national, most of them international fame in their respective branches."

Gross succeeded Dr. Joshua B. Flint, who had attained prominence in Surgery in New England before coming to Louisville. Flint later (1850) accepted the position as chief of surgery in the newly organized Kentucky School of Medicine. This was the beginning of a bitter rivalry between the two institutions. The ill-will was unrelenting until ended in amalgamation in 1908. Lawson (9) quotes from an anonymous pamphlet published in 1842 showing Gross singled out for some especially derogatory remarks: "It was said by some sagacious wag in Cincinnati upon the accession of Gross to the Louisville School, that as Louisville had taken the head, Drake, away from the Cincinnati Medical College, she was welcome to its other extremity, Dr. Gross."

The supporters of Dr. Flint were particularly bitter toward Dr. Gross, who was in no way to blame and who refused to lose dignity by entering into the quarrel. "Throughout he said not a word publicly, rarely even referring to his detractors in private, but manfully, courageously and with a self-confidence and restraint rarely equaled turned opponents into adherents and defamers into the warmest

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admirers." (8) Socially as well as professionally Gross became most popular. He and his family numbered among their close friends the Crittendens, Breckenridges, Wooleys, Prestons, Wickliffes, Pirtles, Ballards, Rowans, Guthries and Prentices. Gross had been a guest of Henry Clay at his home, "Ashland," near Lexington and had heard him speak both in Louisville and in Cincinnati. Gross was a member of the Unitarian Church, the St. George Lodge of Masons and was active in all civic and professional affairs.

Rodman (8) describes an instance in Gross' life which is indicative of his character and personal bravery. On August 6, 1855, Dr. Gross perhaps prevented what would have been not only a calamity to Louisville but an everlasting blight upon her name. The day has since been called "Bloody Monday" because of the riots and bloodshed precipitated by the Know Nothing Party and its attack upon citizens of foreign birth. There was an intention to burn or demolish the Catholic Cathedral on Fifth Street. The excuse for the attack was the belief, or at least the pretense of the Know Nothing followers that men and arms were concealed in the Cathedral. Fearing for the safety of his friend, Bishop Spalding, Doctor Gross sought him early in the morning, explained the situation and advised that he go with him at once to Mayor Barbee, turn the keys of the Cathedral over to him and ask for its protection by the city authorities. The mayor, although a Know Nothing and in sympathy with their acts, could not condone or permit the outrage that was planned. He also was a friend of Dr. Gross. The following card was then published by the mayor and two of the councilmen: "To the Public: We, the undersigned, have in person examined the Cathedral and do assure the community that there are neither men nor arms concealed therein; and further that the keys of said Cathedral on Fifth Street are in the hands of the authorities. Signed, John Barbee, Mayor, T. W. Riley, J. A. Gilles, Councilmen."

Gross Accepts Professorship In Philadelphia

Dr. Gross was aware that his fame and fortune had been made in the Southwest. Here he had found devoted friends and happiness; yet in 1856 when the position of professor of surgery in his Alma Mater, Jefferson Medical College, was offered him, he accepted it although a similar offer from the University of Pennsylvania had been refused the previous year. Unhappy days had fallen on Kentucky. The threats of a civil war were heard and Kentucky was torn by its mixed loyalties.

Regarding his move to Philadelphia, Gross stated in his autobiography, "The sad events that followed during the war, families against families, and friends against friends, dividing the medical profession and introducing the spirit of discord into all ranks and conditions of society proved that I have made a wise decision."

In 1856 when the citizens of Louisville, learned that Dr. Gross and his family had decided to move to Philadelphia a grand ball was given in their honor at the Galt House.

The debt to Jefferson College for the sixteen years of service given by Gross to the University of Louisville was repaid with interest. The senior Gross took with him to Philadelphia his own son, Samuel W. Gross, and Austin Flint, Jr., the son of his Louisville colleague. These young men and Lunsford P. Yandell, Jr., whose father was on the Louisville faculty were classmates and had completed the two terms given in the Kentucky school. Only the Yandells remained in the South. Young Gross and Flint received their degrees from Jefferson College and Samuel W. Gross later succeeded his father as professor of surgery.

Elected President of The American Medical Association at the 1875 Meeting In Louisville

In 1875 Gross, who never lost his love and admiration for Kentucky, returned there to be elected President of the American Medical Association at the Louisville meeting. His address to the association was entitled "One of the Lost Arts." Gross was royally entertained on this occasion and was presented with a

pair of thoroughbred horses by the profession of Kentucky.

William Osler And The Grosses

It is of interest that Sir William Osler was an admirer of the senior Gross and that the writings of both Gross and Eberle were among his favorites (10). It is of further interest that the Grosses were instrumental in bringing Osler from Montreal to Philadelphia. The younger Gross was married to Grace Revere and three years after his death Osler married "the widow Gross" as he used frequently to term her (11). Cushing (10) states that when the Oslers left for England the hugh sideboard, a relic of the senior Gross and known as the "grandstand," was left in the dining room at the Johns Hopkins Hospital. It is now in the custody of the Medical Faculty in Baltimore.

(Authors Note: I am indebted to Dr. Charles R. Austrian of Baltimore for searching out this old piece.)

Final Kentucky Visit to Dedicate Ephraim McDowell Memorial

Samuel D. Gross made his final visit to Kentucky in 1877 when he gave the Memorial Oration in honor of Ephraim McDowell at Danville, Kentucky. Dr. Gross on the occasion was honored by the presentation of the original door knocker from the McDowell home. The presentation was made by Dr. Richard O. Cowling of Louisville in behalf of the Kentucky State Medical Association of which he was president. The McDowell door knocker was for some time a possession of the Museum of the College of Physicians in Philadelphia, but has since been returned to the McDowell house in Danville, where it is kept under glass.

Death and Posthumous Honors

The elder Gross died in 1884. His body was cremated and the ashes now lie in an urn in the Woodlands Cemetery in Philadelphia. The inscription upon the urn was written by his former pupil, Dr. D. W. Yandell of Kentucky.

In the National Capitol in the Smithsonian Park, stands a bronze statue of Dr. Gross erected on a $1500 pedestal provided by the US Congress, by the American Surgical Association, the Alumni Association of Jefferson College, and other friends. A chair in surgery at Jefferson is supported by funds from the estate of his daughter, Mrs. Maria Gross Horwitz, who died in Denard, France, August 25, 1914.

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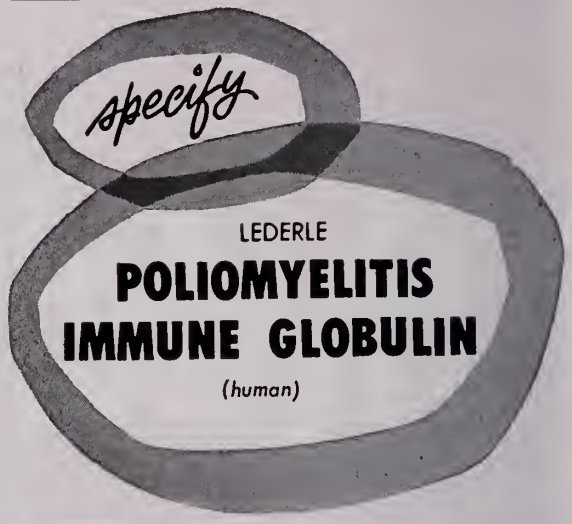

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This first endowed chair in surgery at that school is now held by Dr. Thomas Shallow. The name of Dr. Samuel D. Gross is inscribed in mosaic in the ceiling of the Congressional Library.

Dr. Gross' estate, other than a few bequests, was divided equally among his four children. His first medical library, consisting of more than 4,000 volumes, was more than fifty percent destroyed by fire in 1857 at the University of Louisville library. His library consisting of more than 5,000 volumes, together with his wet preparations, diagrams and museum, was bequeathed at the time of his death to the Philadelphia Academy of Surgery. He also left five thousand dollars to this institution, the interest of which is paid every five years to the author of the best essay on the subject connected with Surgical Pathology.

In Louisville, a portrait of Dr. Samuel D. Gross hangs in the newly dedicated Fred Rankin Amphitheater. Since 1941 the Phi Delta Epsilon Medical Fraternity has sponsored an annual Samuel D. Gross lectureship.

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News Items

R. D. Barton, M. D., has moved from Campbellsville to Lebanon where he will practice general surgery, medicine and obstetrics. Dr. Barton, a member of KSMA, AMA and the Kentucky Society of Gynecology and Obstetrics, received his medical degree from the University of Louisville School of Medicine. He was surgeon for the State Highway Department for 12 years before going to Campbellsville.

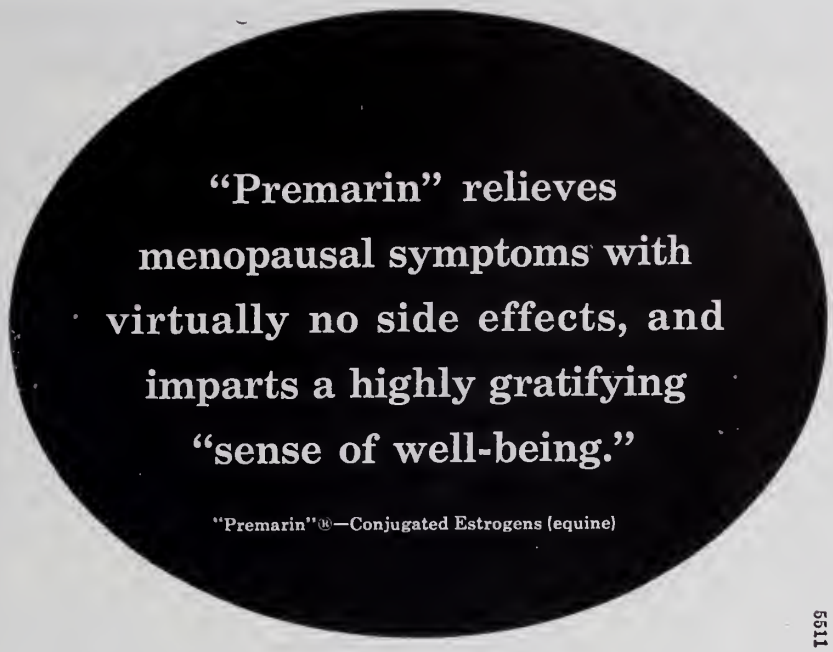
Thomas Kirby, M. D., a 1954 graduate of the University of Louisville Medical School, has begun practice at Western State Hospital, Hopkinsville, Dr. Kirby interned at San Diego County General Hospital in San Diego, Calif.

Harry Whayne, M. D., has moved to Murray where he will practice medicine in the Butterworth Clinic. Dr. Whayne received his Medical Degree from Tulane University in New Orleans in June 1950. He interned at Walter Reed General Hospital. He has practiced medicine in Fort Worth, Texas since 1951.

Ralph Gambrel, M. D., has opened an office in Whitesburg for the practice of medicine and surgery. A graduate of the University of Louisville School of Medicine, he interned at the Good Samaritan Hospital in Lexington.

Don A. Kantley, M. D., of Birmingham, Alabama, recently joined the staff of the Vaughn Clinic at Henderson. He will limit his practice to pediatrics. A graduate of the University of Alabama, he interned at Lloyd Noland Hospital, Fairfield, Ala. He has served three years of residency, one at Fairfield, one at Birmingham Children's Hospital, and one, in pediatric radiology at the Children's Hospital in Cincinnati.

John Watts, M. D., radiologist, recently was added to the staff of the Logan County Hospital. Dr. Watts, a native of Louisville, was graduated from the University of Louisville Medical School. He interned at Good Samaritan Hospital in Lexington. Dr. Watts did postgraduate work in x-ray at the Veterans Hospital.



Thornton Bryan, Jr., M. D., has opened an office for general practice of medicine in Frankfort. Dr. Bryan is a 1954 graduate of the University of Louisville Medical School, and interned at the Philadelphia General Hospital.

H. L. Gragg, M. D., a physician for 44 years, was recently honored in Lebanon City with a day named in his honor and a special three hour program. Dr. Gragg has practiced medicine in Junction City for 28 years.

The Van Meter Prize Award of $300.00 and two honorable mentions for the best essays concerning original work on problems related to the thyroid gland are again being offered by the American Goiter Association. Essays should be submitted to the secretary, John C. McClintock, 149½ Washington Avenue, Albany, N. Y., not later than January 1, 1956.

An official American Medical Association tour to Nassau in the Bahamas is planned during the week of Dec. 3-10, 1955. Kenneth Eardley, M. D., C. M., President of the Bahamas Medical Society has extended an invitation to visiting physicians from the AMA to meet with the BMA for a scientific program on Wednesday Dec. 7.

In Memoriam

GARLAND W. HILL, M. D.

Russellville

1880-1955

Dr. Hill, a former Russellville resident, died July 7 at the Veteran's Hospital in Murfreesboro, Tenn. He was 75.

Dr. Hill, a native Logan countain, was a graduate of the Vanderbilt Medical School. He was a veteran of the Spanish American War and World War I.

JAMES ROSE, M. D.

Olive Hill

1886-1955

Dr. Rose, 69, died at his home July 5 of a heart attack.

A native of Lewis county, he spent most of his life in Olive Hill. He graduated from the University of Louisville Medical School.

Dr. Rose served as mayor of Olive Hill and as state senator from 1928-1936.

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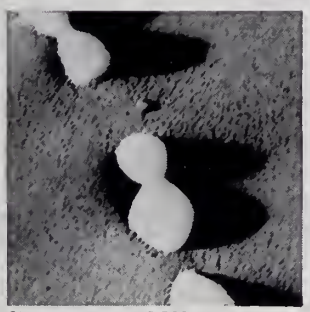
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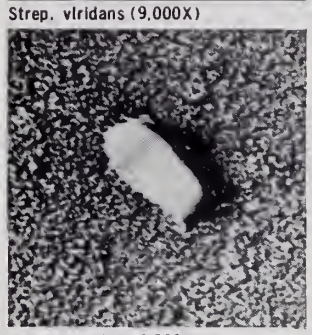
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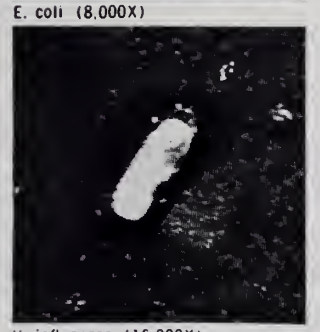
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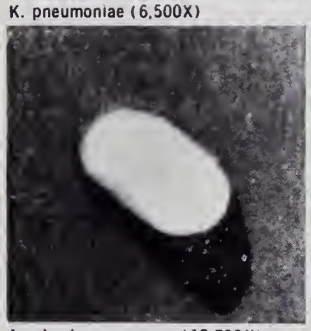
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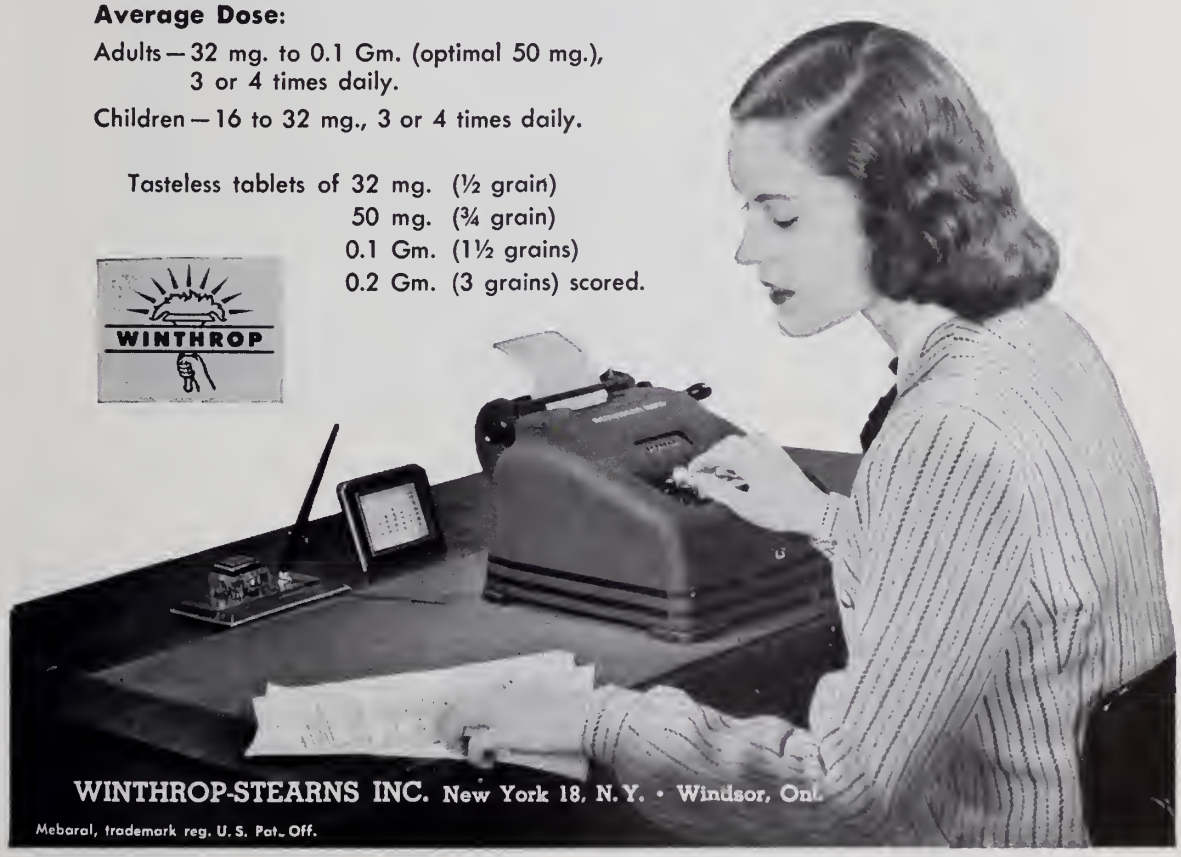

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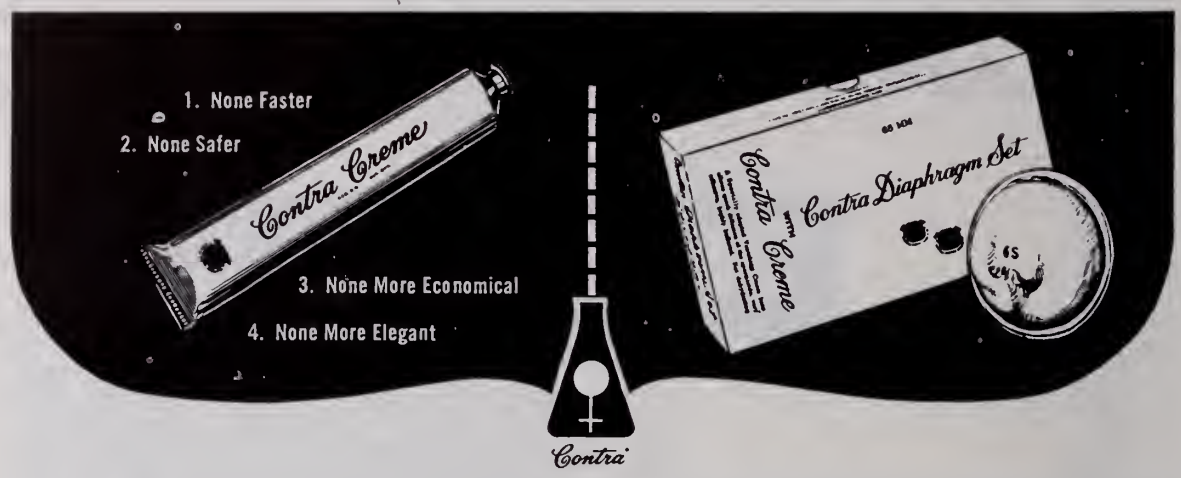

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1. James, W. F. B.: A Study Of A Simple Contraceptive Method For Clinic And Private Patients. West, J. Surg. Gyn & Ob., 59: 197, 1952. 2. Baker, J. R., Ranson, R. M. and Tynen, J.: A New Chemical Contraceptive, Lancet, P 882,, Oct. 15, 1938. 3. Report To The Council On Pharmacy And Chemistry Of The AMA: JAMA 148: 50, 1952. 4. Gamble, C. J. and Brown, R. L.: Relative Spermacidal Times of Commercial Contraceptives, Scientific Exhibit AMA Meeting, June, 1941. 5. Brown, R. L., Levenstein, I. and Becker, B.: The Spermacidal Times of Samples of Commercial Contraceptives Secured in 1942, Human Fertility 8: 65, 1943. 6. Becker, B. and Gamble, C. J.,: The Spermacidal Times of Samples of Contraceptives Secured in 1943, Human Fertility 9: 6, 1944. 7. Ibid: The Spermacidal Times of Contraceptive Jellies and Creams Secured in 1946, 11: 111, 1946. 8. New and Non Official Remedies, 1946.

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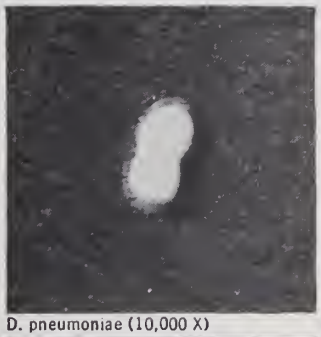

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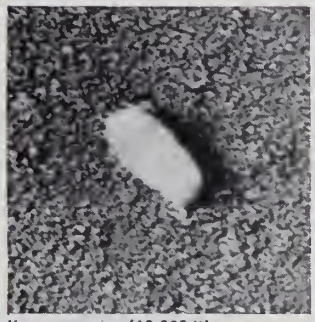

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The body of the newborn infant contains approximately 500 grams of protein, 14 grams of phosphorus, and 0.5 gram of iron.[3] It is estimated that the lactating mother, through breast milk, provides a 26 week old infant with about 12 grams of protein, 76 grams of lactose, and 1.2 mg. of iron each day.[2]

Pork meat, an excellent source of high quality protein, thiamine, niacin, and iron,[4] also supplies valuable amounts of other B vitamins, as well as phosphorus, magnesium, and potassium. The thiamine content of pork is particularly important, since there are few more valuable food sources of this vitamin.[4]

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1. Toverud, K.U.; Stearns, G., and Macy, I.G.: Maternal Nutrition and Child Health, an Interpretative Review, Washington, D.C., National Research Council, Bull. 123, 1950.

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Percentages of Recommended Daily Dietary Allowances* for Pregnant (3rd Trimester) and Lactating Women Provided by 3-Ounce Portions of Cooked Pork Meats and Pork Sausage

	Protein	Iron	Phosphorus	Thiamine	Riboflavin	Niacin	Calories
PREGNANCY (3rd trimester)							
Ham, without bone, 3 oz., cooked[5]	25.0%	17.3%	13.5%	30.0%	10.0%	26.7%	12.5%
Pork Chops, without bone, 3 oz., cooked[5]	25.0%	17.3%	13.3%	47.3%	10.0%	28.7%	10.5%
Pork Sausage, 3 oz., cooked[6]	17.3%	14.0%	9.2%	27.7%	10.1%	18.5%	14.7%
LACTATION							
Ham, without bone, 3 oz., cooked[5]	20.0%	17.3%	10.1%	30.0%	8.0%	26.7%	10.2%
Pork Chops, without bone, 3 oz., cooked[5]	20.0%	17.3%	10.0%	47.3%	8.0%	28.7%	8.6%
Pork Sausage, 3 oz., cooked[6]	13.8%	14.0%	6.9%	27.7%	8.1%	18.5%	12.0%

*Recommended Dietary Allowances, Washington, D. C., National Academy of Sciences—National Research Council, Publication 302, 1953

The nutritional statements made in this advertisement have been reviewed and found consistent with current medical opinion by the Council on Foods and Nutrition of the American Medical Association.

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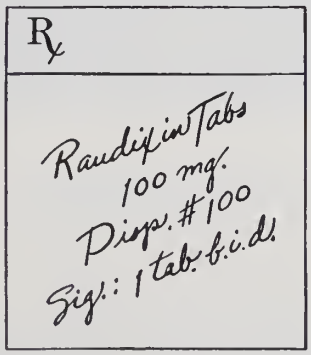

*Ataractic, from ataraxia: calmness untroubled by mental or emotional excitation. (Use of term suggested by Dr. Howard Fabing at a recent meeting of the American Psychiatric Association.)

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TREATMENT OF DIABETIC COMA

(Continued from page 978)

severe the chemical changes or the longer the duration of unconsciousness, the more grave is the outlook.

Diabetic ketosis and coma provide an intracellular cyclone and the effects of acidosis and the lack of diabetic control may be manifest for long periods thereafter. Thus, in some series pulmonary tuberculosis has developed in 15 or 20 per cent of patients within 5 years after diabetic coma. In Table IV are shown the causes of death in 180 patients who have recovered from coma, left the hospital and then were followed up. It will be seen that when comparison is made between the period from 1923 to 1946 with the last 7 years that striking differences appear. Thus, nephropathy or chronic nephritis has become the cause of death in nearly 40 per cent of the deaths in the last seven years. These are patients with diabetes of long duration whose diabetic control has been poor. Coma itself recurred in some of the patients and caused death elsewhere. Pulmonary tuberculosis, formerly a common cause of death in nearly 25 per cent of the patients between 1923 and 1946, has fallen to less than 7 per cent in the later period.

Prevention

Every diabetic patient should be instructed how to test the urine for sugar and that it is important to test it daily.

TABLE IV

CAUSES OF DEATH IN 180 CASES AFTER RECOVERY FROM COMA 1923-1953

	1923-1946	1946-1953
Nephropathy	0	43
Coma	12	10
Cardiac	13	24
Tuberculosis	15	7
Miscellaneous	27	29
TOTAL	67	113

The average duration of diabetes among the 180 cases was 14.1 years.

Control of diabetes by the early use of insulin is important. Finally, when a patient feels sick, he should be taught certain simple rules, as follows:

1. Call a doctor.
2. Do not omit insulin unless the urine test is sugar free.
3. Take a glass of warm liquid every hour.
4. Move the bowels.
5. Get a nurse.

Conclusion

The constant control of diabetes takes on a new significance in the light of the follow-up of diabetic patients at the end of periods of 20 or 25 years. Today control of diabetes is essential not merely for the prevention of the acute and often fatal emergencies connected with diabetic ketosis but because it is evident that the prevention of the characteristic diabetic sequelae, namely retinitis, nephritis of the Kimmelstiel-Wilson type and neuropathy, depends upon the maintaining of as nearly normal and physiological levels in the blood and urine daily as can be achieved. The results of the follow-up carried out by Keiding, Mann, Root, Lowry and Marble[3] show clearly that the incidence of these fatal and crippling complications in the eyes and kidneys can be greatly reduced by daily attempts to keep the urine sugar free and blood sugar tests normal with a diet which is as carefully and accurately prescribed and followed as is possible.

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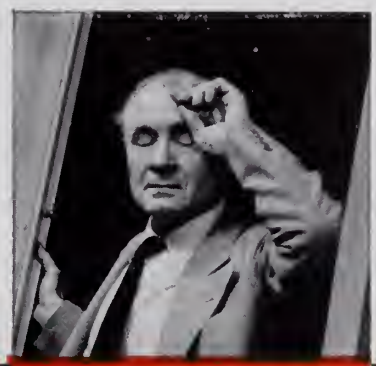

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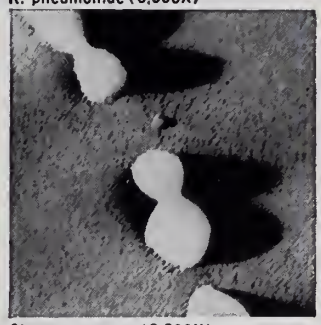

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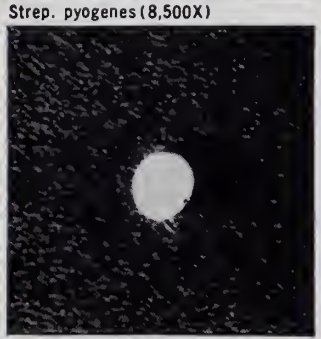

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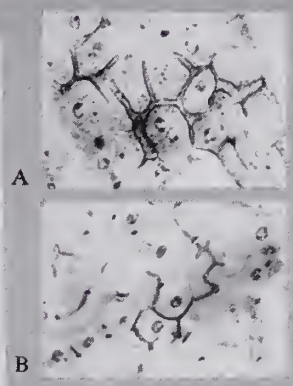

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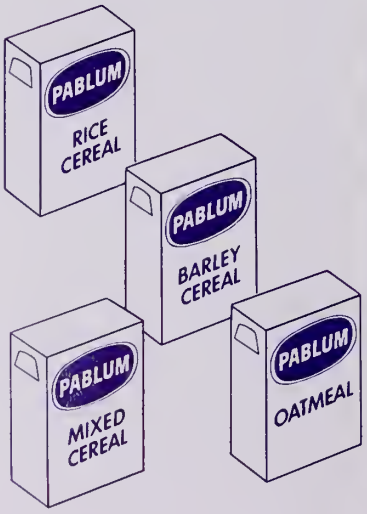

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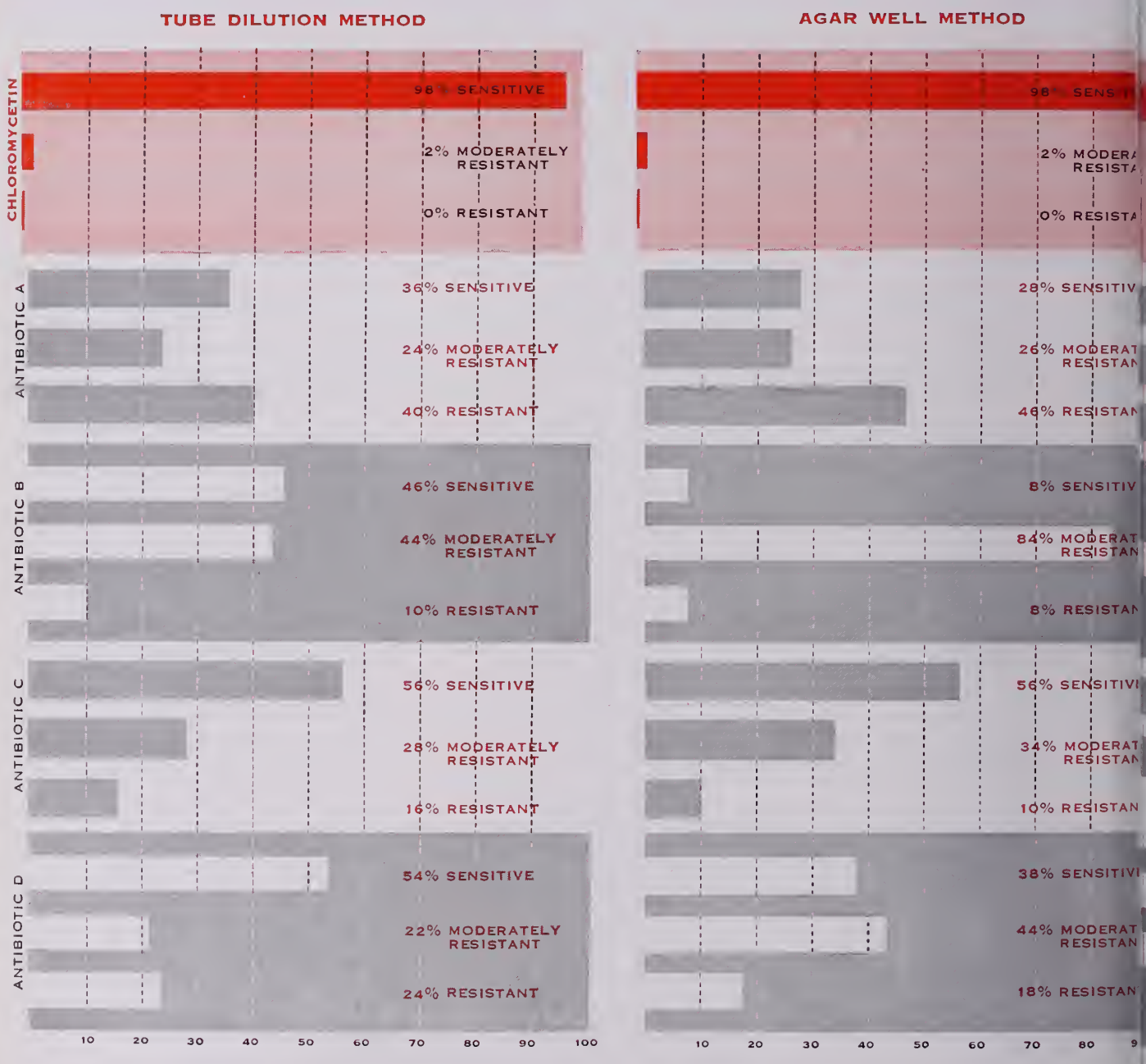

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References: (1) Spink, W. W.: *Arch. Int. Med.* 94:167, 1954. (2) Finland, M.: *J.A.M.A.* 158:188, 1955. (3) Tebrock, H. E., & Young, W. N.: *New York J. Med.* 55:1159, 1955. (4) LeMaistre, C.: *M. Clin. North America* 39:899, 1955. (5) Kagan, B. M.: *J.M.A. Georgia* 44:210, 1955. (6) Branch, A.; Starkey, D. H.; Rodgers, K. C., & Power, E. E., *in* Welch, H., & Marti-Ibañez, F.: Antibiotics Annual, 1954-1955, New York, Medical Encyclopedia, Inc., 1955, p. 1125. (7) Kutscher, A. H.; Seguin, L.; Lewis, S.; Piro, J. D.; Zegarelli, E. V.; Rankow, R., & Segall, R.: *Antibiotics & Chemother.* 4:1023, 1954. (8) Weil, A. J., & Stempel, B.: *Antibiotic Med.* 1:319, 1955. (9) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955.

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President's Page

One of the nicest things that has come to Kentucky medicine was the recent visit of Dr. Elmer Hess, president of the AMA, at our annual dinner. In the course of a delightful address at Dr. Sparks' dinner, Dr. Hess made an interesting observation which he asked us to adopt.

It was that we speak of ourselves in the future as physicians rather than doctors,—since the appellation "doctor" has of recent years become applied to so many outside the realm of medicine, it no longer has its old connotation.

The word doctor is of Latin origin and means "learned" and now we find our world full of learned men who by actual degree have the proper right to be called "doctor."

But the name "physician" can be ours with proper ownership and solely ours. It would connotate, from its derivation, one who works with the laws of nature for the benefit of human health.

The name "physicist" could be reserved, and properly for those men who work with natural laws and their effect on inanimate life in this whirling world of ours, atomic science, electronics, mechanics, explosives, aerodynamic problems and the multitude of other activities crowding today's stage.

Thank Elmer Hess for the suggestion.

Grant Gaither

PRESIDENT

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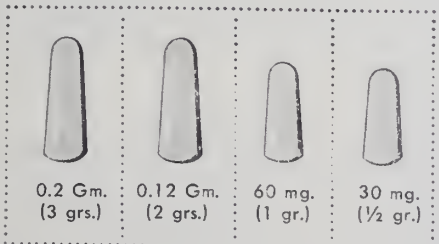

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SURGICAL FORUM: 40TH CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS: Edited by Committee on Forum on Fundamental Surgical Problems: W. B. Saunders Company, Philadelphia, London; 851 pages; $10.00.

This book makes available in one volume a group of papers, by 378 authors, selected to show the trend of progress being made by American surgery. It is concrete evidence of the continuing advancement of our information in fields of laboratory science, clinical management and surgical technique. Most sections are preceded by an introductory summary that gives a concise review of the more important advances to be found in the complete papers of the section.

Evidence is presented that acid gastro-esophageal reflux is prevented by the value (formed by the left crus of the diaphragm) at the gastro-esophageal junction, and in its absence peptic esophagitis will occur. Since most hiatus herniae would destroy this valve (crus), the frequent complications of esophagitis, stenosis, and perforation of the esophagus in hiatus hernia is understandable.

The underlying lesion in hemorrhagic pancreatitis is shown to be a Swartzman reaction that could be invoked by first sensitization of the pancreas by injection of toxin from 44 B strain meningococcus or E. Coli into the pancreatic duct, and then 24 hours later injecting the toxin intravenously. Fatal hemorrhagic pancreatitis developed in almost all animals. There was a fibrin-platelet capillary and vascular thrombosis associated with local ischemia, which is the important factor in the necrosis. Secondary infection and protection by antibiotics is discussed.

Dextran is shown to be no more effective than saline in treating low blood volume due to increased capillary permeability (burns, intestinal obstruction, tourniquet or crush injury), but stays in the circulation well when administered after blood loss alone.

Immune aspects of cancer are given more confirmation by experiments showing definite complement fixation reaction to certain tumor antigens, and an acquired immunity to a lymphosarcoma in the rat.

These are examples from a volume useful to anyone interested in the recent advancements in surgical knowledge.
one interested in the recent advancements in surgical knowledge.

Chas. W. Caldwell, Jr., M. D.

PRACTITIONERS CONFERENCE, VOLUME 1: Edited by Claude E. Forkner, M.D.; Appleton, Century Crofts, Inc., New York; 411 pages.

"Practitioners Conferences, Volume 1" is an attempt by the New York hospitals and Cornell Medical Center group to disseminate, on a wide scale, information gathered from editing actual conference participation discussions concerning various diseases.

The intent to keep pace with the rapid advances in medicine and the evaluation of current accomplishments is an excellent thing, but as is so often the case, the intent and the results sometimes vary considerably.

The book is composed of a group of discussions, by chapters, of various diseases usually unrelated. For example, chapter 1 concerns Influenza and Primary Atipical Pneumonia, and chapter 17 pertains to Distorders of the Feet.

Whereas the disease discussions are in general interesting and well written, there are some places in the book that are either non-explanatory or too verbose in description.

It must indeed be a difficult thing for one to write a book and far more difficult probably to edit a group of unrelated medical subjects. Perhaps a better book could have been developed by grouping into one volume a separate anatomical system, such as pulmonary diseases, and in the next volume cardiac diseases.

In its present status one cannot use this book adequately for any type of reference, but rather for interesting and sometimes questionable reading.

LEGAL MEDICINE: Edited by R. B. H. Grandwohl, M.D., Sc.D., F.A.P.H.A. The C. V. Mosby Co., 1954. 1051 Pages; $20.00.

The book is made up of 39 chapters. Every phase of legal medicine is covered by a long and distinguished list of contributors. Each chapter covers its subject so thoroughly that it makes this an excellent reference book. Be-

(Continued on page 1042)

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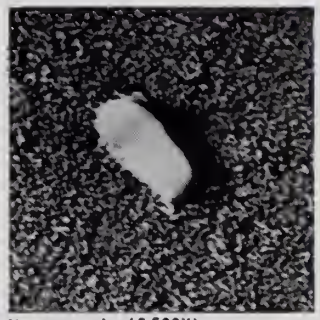
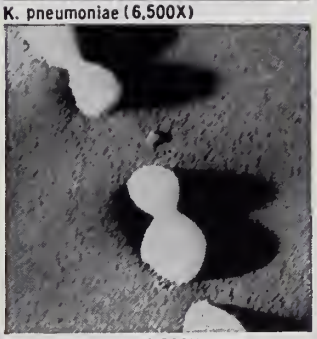
D. pneumoniae (10,000X)



K. pneumoniae (6,500X)



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IN THE BOOKS

(Continued from page 1040)

cause of this wealth of detail there is some repetition.

There are no definite sections. The arrangement of the material, however, is such that the first few chapters deal, for the most part, with the legality of the autopsy and the technique of a medicolegal autopsy. Much stress is placed on the need for special training in medicolegal autopsy work. The shortcomings of the medicolegal autopsy performed by the pathologist, untrained for this type of work, are emphasized. The next few chapters describe the proper examination of all types of traumatic wounds. Post-mortem changes caused by physical agents, chemical agents, and thermo agents are covered in detail. The chapter on poisons is accompanied by a complete section on therapy.

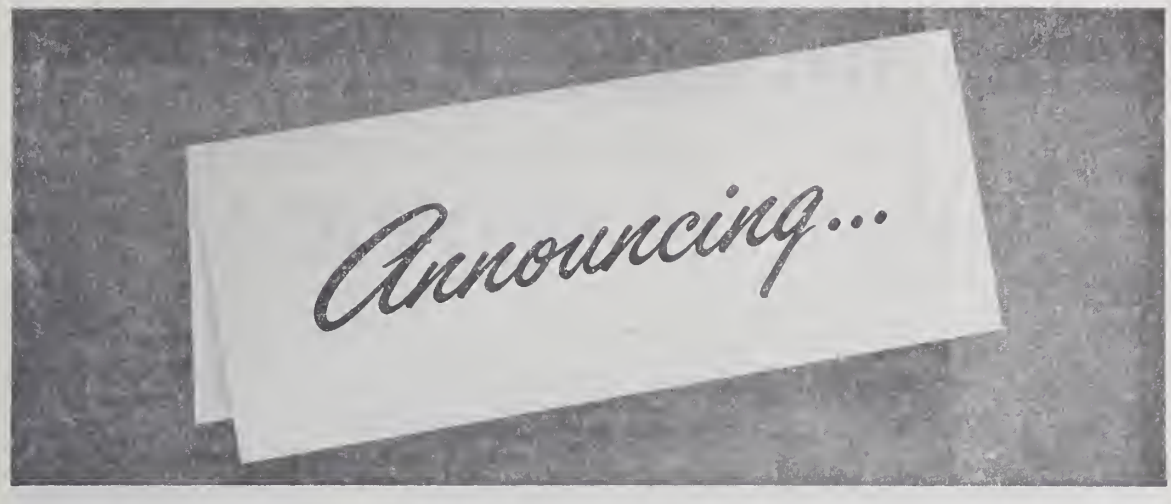
The mid-portion of the book covers those subjects which one would expect to be dealt with in a police laboratory. There is a chapter on identification by means of skeletal studies. Identification by means of dental evidence, examination of hairs and fibers, blood grouping tests, all are covered in great detail. The necessary laboratory procedures are outlined. The chapter on blood studies is unusually thorough. The chapter on Toxicology is also voluminous and includes many laboratory tests for identification of various drugs and poisons.

The last few chapters which form another section of the book deal with more abstract types of investigation, including forensic psychiatry, narco-analysis and legal rights of the mentally ill.

John D. Gordinier, M. D.

The Life Insurance Medical Research Fund has given more than $7,000,000 for heart research in its first decade of existence, according to M. Albert Linton, chairman of the Fund's board of directors. Mr. Linton said that the 1955 awards so far total $929,400. Eight hundred sixteen thousand, two hundred of this went for 66 grants to institutions for heart disease research, and $113,200 for 27 fellowships given young men and women in training as heart research workers.

The 17th Annual award of the American Pharmaceutical Manufacturers' Association will be presented to Charles W. Mayo, M.D., surgeon-editor-statesman member of the distinguished medical family, according to Kenneth Valentine, APMA president. The award is being presented to Dr. Mayo for "his outstanding contributions to both medicine and world understanding."



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WASHINGTON NEWS DIGEST

Washington, D. C.,—If advance signs mean anything, the Eisenhower Administration next year can be expected to ask Congress for substantially more money for medical research, both direct research by scientists on the U. S. payroll and grants to others.

Currently the federal government is spending more money on medical research than at any time in history—almost $98 million through the National Institutes of Health alone. In addition, other millions are being spent on medical research in the Department of Defense, Veterans Administration and other agencies. Much of it is difficult to isolate in the federal budget.

A special committee named by the National Science Foundation at the request of former Secretary Hobby has been at work for some time on an appraisal of HEW's medical research programs. Its report, due before the reconvening of Congress, should be valuable to both the administration and the appropriations committees.

A few examples of what is happening this year:

National Cancer Institute has $24.8 million to spend, about three million more than last year, with two-thirds going out in grants to non-federal researchers. National Heart Institute also is working on a much more liberal budget, $18.7 million in contrast to last year's $16.6 million. Because of the spectacular publicity now being given to heart research as a consequence of President Eisenhower's illness, it is a foregone conclusion that next year this institute will get a great deal more money.

The Mental Health Institute is profiting by the largest single increase of any research operation, almost $4 million, from $14.1 to $18 million. Here again the prospects are for a substantial increase next year; problems of mental health are receiving much public attention, a situation that will not be ignored by Congress. Furthermore, the nationwide survey of mental health problems now about to get under way will point up the shortcomings in mental health research, and be an additional argument for more U. S. dollars.

All the other research institutes also shared in last session's Congressional generosity. The Institute of Arthritis and Metabolic Diseases has about $2.5 million more, $10.7 million instead of the $8.2 million last year. The Institute for Neurological Diseases and Blindness went from $7.6 million to $9.86 million, the Microbiological Institute from $6.1 million to $7.5 million, and the Dental Health Institute from $1.9 to $2.1.

As has been customary with recent Congresses, Senate and House this year actually voted more money for medical research than the Bureau of the Budget permitted Public Health Service to request. That may not be the situation when appropriation bills come up next session. Secretary Folsom of the Department of Health, Education, and Welfare did not take office until Congress was about to adjourn last summer, but since then he has repeatedly gone on the record in favor of even greater U. S. expenditures for research. In October Mr. Folsom declared:

". . . Today we find new problems and new opportunities. We find that heart disease, and cancer and arthritis, are taking an increasing toll. And so today as a nation we are changing our lines of battle to fight this increase in chronic and major diseases. All the facts point to one great need. It is the need for more research—to learn how these chronic diseases are started, so they can be prevented; to learn to detect them in the early stages, so they can be cured. . . "

Again in November, addressing a conference on antibiotics, Mr. Folsom struck the same key, only this time more firmly. After noting that the U. S. now is spending over 12 times more on medical research than it was spending in 1946, he declared: "We must seriously consider making even more funds available for medical research to bring even greater benefits to humanity."

NOTES:

The Joint Congressional Committee on the Economic Report may have some health legislation to offer next year as a result of a study of the problems of the low-income family, including methods of paying hospital, physician and drug bills.

The medical and criminal problems connected with narcotic addiction have occupied the attention of two Congressional groups between sessions, subcommittees of the Senate Judiciary Committee and the House Ways and Means Committee. The latter is particularly worried over abuses it claims to have discovered in the use of barbiturates and amphetamines.

Dr. Frank B. Berry, assistant Defense Secretary for Health and Medical matters, in his annual report warns that the doctor procurement problem again may become acute, despite last summer's two-year extension of the act. He said the Department may not be able to obtain all the older physicians it needs because of the amendment barring the drafting of men over 35 if they have applied for a medical commission and been rejected on purely physical grounds. Also, Dr. Berry thinks the ratio of 3 physicians per 1,000 of troops may be too narrow a margin for safety.

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1. Pomeranze, J. et al.: Angiology, June, 1955.
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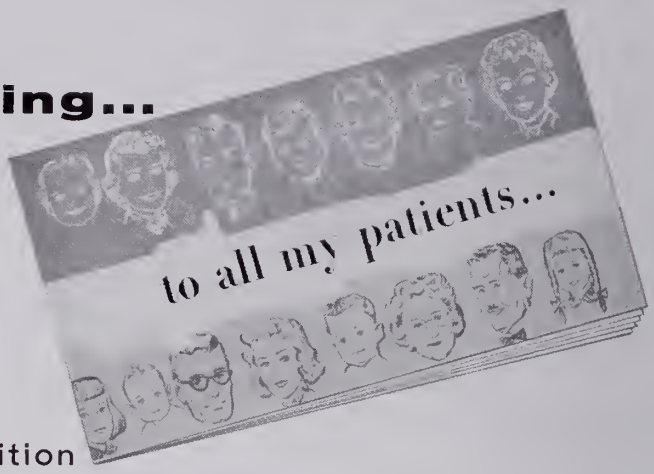

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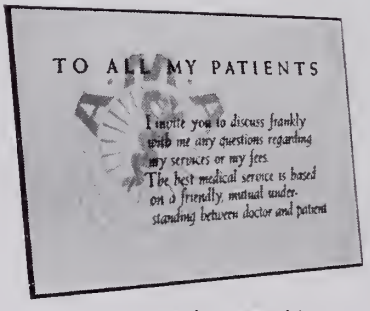

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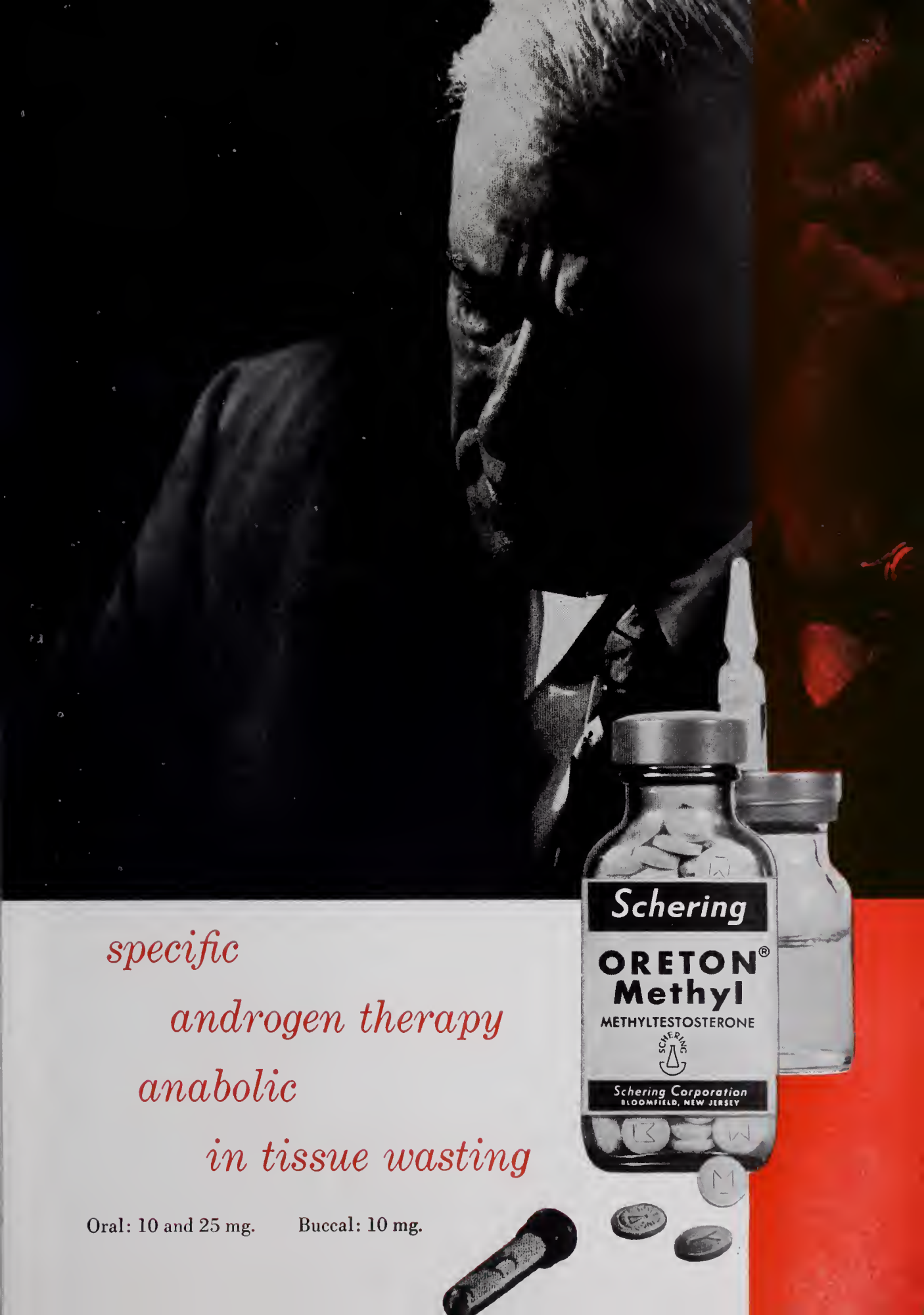

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VOL. 53 DECEMBER, 1955 NO. 12

Surgical Aspects of Terminal Care For The Cancer Patient*

JOHN B. FLOYD, JR., M.D.

Lexington

Responsibility for the care and comfort of the incurable cancer patient generally is that of the home physician. The cooperation of an educated family in carrying through the necessary nursing care is a delegation of responsibility which has beneficial features to both the patient and the family. To the immediate family, the tragedy of incurability is a close and ever-present specter, even though terminal care of the loved patient may be transferred to the nurses in an institution. Proper preparation of the family to achieve the desired high type of terminal care in the home necessitates proof of incurability of the cancer and a prognosis expressed in simple terms of nursing care.

In addition to preparing the family for the problem of nursing care and proving presence of incurability, certain palliative steps occasionally may be taken, primarily with the idea of relieving the patient of distressing situations and secondarily with the idea of prolonging life.

Nursing Care

Nursing care is simple and indispensable. Most patients can accept regular diets, and neither nutrition nor hydration require supplementary efforts. Gastric feedings through an indwelling polyethylene tube can maintain an adequate balance for those patients who are unable to eat, even in the home. This type of soft tube seldom causes ulcers and sore throats even with long periods of use. Feedings may be planned to include large amounts of proteins in the form of milk, gelatins, eggs, cheese, and custards, even without amino acids.

Oral care should be a routine duty of the active patient. In those who become bedfast and inactive, warm salt water and hydrogen peroxide are easily available for mechanical cleansing. If the parched lips of dehydration are a feature, an agent such as glycerine repeatedly applied will prevent the development of painful fissures.

Proper elimination of feces and urine are the other functions requiring nursing care. In those who are inactive, it is as important to prevent fecal impactions as it is to change the bed sheets if the patient is involuntary. A plain water enema as needed has more soothing an action than has soap sud enemas. A Foley bag catheter attached to a bedside bottle with a straight tube may solve a major nursing problem. Irrigation of the bladder once or twice each day with potassium permanganate solution (1-8,000) until the solution returns unreduced in color, usually will keep the bladder clean and comfortable. The use of a collecting bottle permits ready appraisal of adequacy of the renal output. Prevention of bed sores is aided greatly by the presence of a dry bed.

Thus, feeding and elimination problems are the main elements of good nursing care, and are the first useful steps in the broad picture of care of terminal patients.

Anxiety, and later pain, are symptoms for which we usually dispense drugs and sympathy. Drugs are needed to balance the emotional rebellion against death and to develop a placidity and calmness in the outlook of the patient and family.

*Presented at Licking Valley Medical Society Spring Meeting, Williamstown, Ky., March 10, 1955.

Palliative Surgery

Surgical palliation in advanced malignancy lends itself to a widely speculative approach. On broad grounds, if one cannot cure a patient, one must not hurt the patient. Prolongation of life very briefly at the expense of increased pain or pauperization is not a desirable step. The award of a minimum of six months of normal life is probably the shortest period one should accept from major palliative surgery for a disease which is incapacitating at the time of surgery. When palliative surgery is used to relieve distressing situations, then one is on a firmer footing when recommending such a step.

Specific problems are difficult for generalization. In carcinomas of the neck, mouth, and pharynx, the functions of feeding and breathing have to be considered. The indwelling soft feeding tube is an answer to the need for food. A tracheotomy often is a simple step to improve a situation when a patient begins to aspirate food or saliva, and may be of benefit in easing respiratory exchange in the presence of an encroaching obstruction[1].

This eases a problem of long term nursing, but probably should not be considered for terminally ill patients. Proof of inoperability would be evidence of metastasis beyond regional cervical lymph nodes. The presence of pulmonary or cerebral metastasis would obviate radical surgical efforts. Constitutional defects of debilitated old age or poor cardiac reserve should contraindicate surgery. On the other hand old age alone should not deprive a patient of opportunities for a cure, or for palliation.

Another category requiring consideration is carcinoma of the breast. Since 70% of patients with axillary metastasis and 35% without axillary metastasis do not survive five years[2], we will do well to pick out signs indicating inoperability. The presence of certain signs described by Haagenson as indicating categorically inoperable cases are[3]: (1) Edema of more than one third of the skin over the breast. (2) Satellite tumor nodules in the skin. (3) The presence of intercostal or parasternal nodules. (4) Edema of the arm. (5) Supraclavicular lymphatic involvement. (6) Inflammatory carcinoma. (7) Distal metastasis, and (8) When occurring during pregnancy or lactation. If two or more of the following signs were present, the cases were classified as inoperable: (1) Ulceration of the skin. (2) Edema of less than one third of the skin of the breast. (3) Fixation of the tumor to the chest wall. (4) Positive axillary lymph nodes larger than 2.5 cm. or (5) Fixation of positive axillary nodes to the skin and deeper structures.

In terminal care, ulcers are dressed with simple medicaments, such as plain vaseline and sterile sheeting. Edema of the arm should be controlled with compression bandages of elastic adhesive, for the discomfort of elephantiasis or its complications is always a greater problem than is the use of the elastic adhesive bandage. Palliative x-ray treatment should have a more prominent place in therapy of inoperable carcinoma of the breast than radical surgery. Certain "cancer resistant" patients with painful osseous and liver metastases might be considered for adrenalectomy.

Carcinoma of the lung probably is not curable in the presence of metastases beyond the immediate hilar glands. A preoperative positive biopsy of the scalene or the inferior deep cervical nodes is a popular means of proving inoperability. Extension to the chest wall or liver is accepted as a sign of inoperability, though one occasionally hears of survivals following chest wall resections. Palliative resections to remove abscessed or bleeding lungs due to carcinoma are steps to be considered in promising a more comfortable survival period. After use of nitrogen mustard every 6-8 weeks for the remissions expected, one has little to offer other than supportive sympathy and opiates.

With use of the radical subtotal gastrectomy of Ochsner[4], in operable cases of carcinoma of the stomach without nodal involvement, five year survivals now show an increase to 57%. If a palpable mass is present, one usually finds a nonresectable lesion. The presence of peritoneal metastases as noted in the cul-de-sac on rectal examination would denote inoperability, as would a large positive left supra-clavicular node. Even in the face of signs of non-curability, palliation of distressing obstructive symptoms may justify gastroenterostomy. Sugar water and white of eggs spooned into the mouth frequently may be tolerated with comfort in obstruction.

Carcinomas of the rectum and colon constitute another large group of tumors with a high cure rate. Distal metastases such as to the liver, lung, and peritoneal surface indicate incurability. Extension to surrounding organs otherwise may

not indicate non-resectable lesions. Palliative procedures such as colostomy and ileo-colostomys here have a valuable application in relieving pains and discomforts for relatively long periods. Control of the colostomy is achieved with plain water irrigations daily, with a pad over the stoma otherwise to protect the clothing from mucus. With a residual distal segment influencing proximal peristalsis, it is more difficult to control the elimination. A colostomy bag should never be considered. Patients quickly learn to avoid foods which are followed by diarrhea. They are clever in adjusting to this routine with a constipating diet.

Carcinoma of the cervix is one of the most common carcinomas seen in women. Treatment is almost entirely with radiation. Surgery still is not a proved improvement. Stage I's should have about a 70%, 5 year cure rate, Stage 3's have about a 30%, 5 year cure rate, and Stage 4's have about a 10%, 5 year survival[5]. In the incurable cases in this location one begins to find most striking instances of complications, such as vesico-vaginal and recto-vaginal fistulas. Pain is common because of inflammatory reactions in the pelvis and skin excoriations around the vulva. Defunctionating colostomys and cutaneous ureterostomys[6] are remarkable in the relief of symptoms for a more comfortable demise. Unless adequate control of the urine is obtained, one must keep the patient dry with repeated dressings. As is true with carcinomas below the diaphragm, neuro-surgical proceedings may offer promise of pain relief.

Summary

Palliative procedures for surgery of carcinoma are acceptable if comfort of the patient and an active prolongation of life follows.

Palliative procedures are used only in cases of proved inoperability of the lesion.

Palliative procedures are useful when they will improve good nursing service which is the desideratum of good terminal care.

Palliation consists of good nursing care in addition to sedatives, opiates, drugs for remission of the carcinoma, and supervision and education of the attendants and family.

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Diagnosis and Surgical Treatment of Aneurysm of the Abdominal Aorta

J. HERMAN MAHAFFEY, M.D.*

Louisville

Although an aneurysm of the abdominal aorta may exist for a considerable length of time before giving rise to symptoms, the onset of symptoms in these patients is generally a poor prognostic sign. One half of these patients will die within six months to two years after the onset of symptoms (figure one). [4, 17, 20, 21.]

In an extensive review of the literature of 1202 saccular aortic aneurysms in Great Britain during the preceding one hundred years, Colt[4] in 1927 analyzed 707 cases of aortic aneurysm which he considered valid for statistical purposes. One hundred and twenty-two of a total of 132 saccular aneurysms of the abdominal aorta occurred in males whose average age was 55.9 years at the time of onset of symp-

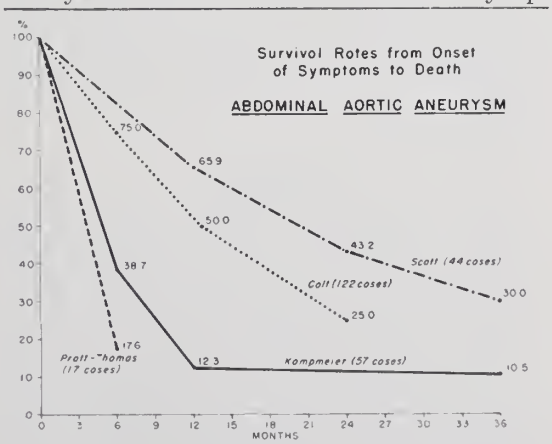

Figure 1.

*From the Department of Surgery, University of Louisville School of Medicine, and the Louisville General Hospital

toms. In these cases the time from the first recorded symptoms until death occurred averaged 18.1 months. Of these patients one quarter were dead in six months, another quarter in thirteen months, a third quarter in twenty-four months, and only a quarter of all the patients lived more than this time. Thirty-eight per cent of Kampmeiers'[17] fifty-seven patients were alive six months after the onset of symptoms, and only twelve per cent were alive at the end of one year. Scott[21] in 1944 found that only 30 per cent of his forty-five patients with syphilitic abdominal aortic aneurysm were alive at the end of three years after the onset of symptoms and only 17 per cent were alive after five years. Only three of seventeen patients with abdominal aortic aneurysms reported by Pratt-Thomas[20] were alive six months following the onset of symptoms.

With rare exceptions the life expectancy of all patients in this group is considerably less than that of the normal population of the same age group.[13] Half of the traced patients in Estes' group of one hundred and two patients were dead within three years after the diagnosis of abdominal aortic aneurysm was made.[13] Estes found that the survival rate for the patients who were asymptomatic at the time of diagnosis (one-third of the entire group) was no better than the survival rate of the patients who had symptoms.

Manglia and Gregory[19] noted that in recent years abdominal aortic aneurysms have been encountered more frequently than thoracic aneurysms and suggested that the reversal in incidence of the two major types of aortic aneurysms is due, at least in part, to a decrease in cardiovascular syphilis and an increase in the age of the population. Similarly Blakemore and Vorhees[2] recorded both a relative and absolute increase in aneurysms due to arteriosclerosis in a study of 365 cases of aneurysms of the aorta during the years 1932 to 1953.

Symptoms

The outstanding symptoms of aneurysm of the abdominal aorta are pain, present in 37 to 66 per cent of the patients, and an abdominal mass, noted by the patient in 15 to 37 per cent of the cases. [13, 17, 21.] The type of pain has been described most often as throbbing, but may be aching, beating, lancinating or thumping. The pain may be either constant or intermittent, and frequently is worse at night or is particularly aggravated when lying down[17,21.] When the pain is localized the epigastrium is usually the site. Pain in the back is present in 17 to 35 per cent of the patients, most often being localized in the middle of the back. [13, 17, 21.] The development of a continuous gnawing or boring type pain, more severe at nights, indicates erosion of the vertebral bodies[21.] Sudden exacerbation in the severity of the pain with radiation to the flanks, hips, groin or back is strongly suggestive of acute perforation of the aneurysm.[5]

Ten to twenty per cent of the patients will exhibit gastrointestinal symptoms. Loss of weight was a frequent symptom in twenty-three of Kampmeiers' sixty patients, the amount varying from a few pounds to as much as 35 pounds.[17.]

Physical Findings

The significant physical finding is a palpable expansile abdominal mass present in 70 to 90 per cent of these patients[13,21.] In one quarter to one half of the patients a thrill or bruit may be noted over the mass [13,17.] Pedal pulses are generally present but are usually diminished, and may be absent. Scott [21] noted that in the differential diagnosis of abdominal aortic aneurysm emphasis is frequently placed on palpable differences in the two femoral pulses, and on delay of the femoral pulse in comparison with the radial.

Roentgenogram and Aortography

Flat and lateral roentgenograms of the abdomen may be of considerable value in confirming the diagnosis (figures two and three). They frequently show a rim of calcification about the aneurysm. Erosion of the vertebral bodies may be demonstrated in some of the patients with syphilitic abdominal aortic aneurysm.

Translumbar abdominal aortography utilizing 25 to 50 cc of 70% Urokon(R) solution gives valuable informaton of the size of the aneurysm and its relation to the renal arteries and aortic bifurcation.

Surgical Treatment

The surgical treatment of aneurysms may be palliative or curative. Wiring and electrothermic coagulation of aneurysms, banding of the aorta in conjunction with wiring and electrothermic coagulation of aneurysms, and the cellophane wrapping of aneurysms are palliative procedures.

Blakemore[1] employed the method of banding the aorta in conjunction with

Figure 2. Antero-posterior roentgenogram of abdomen. A rim of calcification about the aneurysm of the abdominal aorta is shown.

Figure 3. Lateral roentgenogram of abdomen. A rim of calcification about the aneurysm which lies immediately anterior to the bodies of the lumbar vertebrae is shown.

wiring and electrothermic coagulation in the treatment of 32 patients with arteriosclerotic aneurysms of the abdominal aorta. Four of the seven postoperative deaths in the series occurred in patients who were operated upon for control of hemorrhage associated with rupture of the aneurysms. Ten of the remaining twenty-five patients died within one month to three years following the surgical procedure, and death in four was due to rupture of the aneurysm. The fifteen patients now living have survived for periods ranging from nine months to four years, and in four of these fifteen patients a second stage operation was necessary to complete the closure of the aorta. DeTakets[12] noted failures in fifty per cent of 35 aneurysms in the thorax and 10 in the abdomen treated by wiring, and in the other half, in whom the pain was relieved and the aneurysm appeared stationary, death occurred within three to five years. DeBakey[7] considers the cellophane wrapping procedure of aneurysms as not only ineffective but probably harmful inasmuch as wrapping separates the wall of the aneurysm from its blood supply, which, together with the pressure necrosis of the clot inside the wall, causes rupture to take place.

The most effective surgical approach to aneurysms of the abdominal aorta is excision of the aneurysm and replacement of the segment by an aortic homograft[8,12,18]. This procedure is a curative one.

Recent impetus to the surgical removal of aneurysms followed the demonstration by Gross and his co-workers[14] of a successful method of preservation of human arterial grafts at temperatures just above freezing in a balanced electrolyte solution to which was added 10 per cent homologous serum, penicillin and streptomycin. Disadvantages associated with this method of preservation of aortic homografts are the possibility of contamination of the homografts during the storage period, and the limited period of usefulness of such prepared homografts. Fatal rupture of an aortic homograft prepared in this manner and stored for 76 days has occurred.[15] Hufnagel and associates,[16] and others[6] have studied and popularized the freezing process for preservation of homologous vascular grafts. Grafts prepared in such a manner would appear to have an indefinite storage time. Similar histological changes occur in homologous grafts transplanted immediately without storage, in those stored above

freezing in balanced electrolyte solutions and those which had been frozen.[16] Regardless of the method of preservation, the aortic homografts fail to remain viable and serve essentially as struts for replacement by connective tissue. Early encouraging results have been reported with the use of pliable plastic tubes for replacement of the aorta and aortic bifurcation.[22]

DeBakey and his associates,[10] whose experience is the most extensive, recently reported their results with sixty-seven aneurysms of the abdominal aorta treated with excision of the aneurysm and replacement of the resected aortic segment with an aortic homograft. Excellent results were obtained in fifty-two of the patients. There were thirteen early deaths and two late deaths in the group, a mortality rate of 22.4%. Briefly, the surgical technique which they employ involves a mid-line abdominal incision and exposure of the aneurysm by incising the ligament of Treitz and the posterior peritoneum to the left of the root of the mesentery after first displacing the small intestine to the right.[8] After preliminary control of the aorta proximal to the aneurysm, usually a point just below the renal vessels, and distally of the common iliac arteries by encircling tapes about the vessels, ten milligrams of heparin in solution are injected into the aneurysm just prior to applying the occluding clamps to the aorta and the iliac vessels. The inferior mesenteric artery is divided previously.

The aneurysm is then excised from below upwards between the clamps, ligating the lumbar vessels, which are divided. The preserved aortic homograft is then sutured in place using a continuous through-and-through suture of 4-0 arterial silk for the proximal aortic anastomosis. The iliac anastomosis is completed with a continuous through-and-through suture of 5-0 arterial silk. Following completion of one iliac anastomosis, blood is usually allowed to flow through the completed segment by applying an occluding clamp to the other iliac segment of the graft while that anastomosis is being completed. Bilateral lumbar sympathectomy is routinely employed in these cases.[9] Below the level of the renal vessels the aorta has been safely occluded for periods of one to two hours without the occurence of any residual ischemic changes.[9] Over eighty per cent of the aneurysms involve the aortic bifurcation, requiring the use of a bifucation aortic homograft[6].

Fortunately aneurysms of the abdominal aorta only occasionally involve the renal vessels. Recently Bowers and his associates[3] described a technique of resection and replacement of the abdominal aorta and renal arteries in dogs. Renal function studies demonstrated that immediately renal function was poor, with a rapidly rising blood urea nitrogen, but a subsequent progressive improvement in renal function was noted, with a fall in the blood urea nitrogen to within normal levels, in about two weeks.

Cooley and DeBakey[5] operated on six patients with ruptured aneurysms of the abdominal aorta, resecting the aneurysms and inserting an aortic homograft with a mortality of 50 per cent. The interval between the onset of symptoms and operation varied from ten hours to nine days, and three of these patients withstood travel by ambulance of distances of 90, 120, and 160 miles immediately prior to operation.

Recent experience with six cases of dissecting aneurysm of the thoracic aorta treated surgically have been reported.[11] Angiocardiography was employed as an aid to diagnosis. Surgical treatment, in one patient in whom the dissection was acute and involved the entire length of the aorta, consisted of interruption and repair of the thoracic and abdominal aorta with anastomosis.

Summary

Within the past seven or eight years surgical correction of aneurysms of the aorta by excision of the involved segment has been made feasible and practical because of the development of successful methods for preservation of aortic homografts which heretofore had been lacking. Recently, surgery in this field has been successfully extended to include ruptured as well as dissecting aneurysms of the aorta. Because of the very poor prognosis which is associated with aneurysms of the abdominal aorta, excision of the aneurysm and replacement of the segment by aortic homograft should be performed once the diagnosis is established.

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Supervoltage Radiation Therapy; The University of Louisville—Louisville General Hospital Cobalt 60 Unit*

HERBERT D. KERMAN, M.D.
and
J. T. LING, M.D.
Louisville

Supervoltage radiation therapy is not a new concept or modality in the field of radiotherapy. Equipment for the production of supervoltage radiation has been available, and used successfully for approximately twenty years. Considerable information and experience is available concerning the effects of such irradiation; its advantages over "conventional radiotherapy," its limitations, and its complications. However, widespread experience with this type of irradiation has been limited because of the high cost and the restricted availability of such equipment. In those centers where such equipment has been available it has found an accepted place in radiotherapy, and its use has become an established procedure.

Since the end of World War II there has been a definite upsurge of interest in supervoltage because of the availability of nuclear reactors for the production of radioactive isotopes whose radiation emissions have been in the energy range of the supervoltage X-ray generators. It has been possible to make radioactive isotopes in these nuclear reactors to form a "source" of gamma rays, comparable to the equivalent energy of a one to three million volt X-ray generator. Of all the possible isotopes considered and actually produced, radioactive Cobalt has proved to be the most practical and desirable for this purpose to date. By using a radionuclide like Cobalt 60 as a source, relatively cheap, practical, and flexible units designed for "gamma" beam therapy have been produced. In the past five years there have been at least five different designs for Cobalt 60 Teletherapy units developed, and all have proved to be useful, with minor advantages and disadvantages inherent in each design. As more and more high specific activity radiocobalt is being produced, it is quite likely that these units will in time become standard equipment in many of the larger tumor centers and general hospitals.

The term supervoltage therapy is generally considered to relate to the energy range of one million volts and above. Conventional X-ray therapy or so called "deep X-ray" is considered to be within the 200-400 kilovolt range. The essential advantages of supervoltage over conven-

*From Department of Radiology, University of Louisville School of Medicine

tional deep X-ray are simply the result of the physical characteristics of the beam. These physical advantages are four in number:

1. Increased percentage depth dose.
2. Decreased skin dose.
3. Lessened absorption of radiation in dense structures such as bone and cartilage.
   Reduction in integral (or volume) dose.

Increased Depth Dose

The primary physical advantage of supervoltage is said to be its increased percentage depth dose.

As the energy of the beam increases, the wave lengths of the beam of radiation diminish, increasing the ability of the rays to penetrate tissues. This is because of the progressive reduction in both the photoelectric and Compton scattering processes of absorption. This combination of diminished side scattering and lower absorbability of the direct beam accounts for the higher depth doses secured by a supervoltage beam.

In a comparison of a Cobalt 60 beam and a heavily filtered 200 KV conventional deep X-ray beam, we find that a significant increase of approximately 20% is gained by using the Cobalt beam (Fig. 1), with the same irradiation field area and focus skin distance.

The usual methods of increasing percentage depth doses with conventional apparatus are by increasing the field size or increasing the focus skin distance. The former technique utilizes more area to enhance the scattering phenomenon of ionizing rays within tissue to increase the dose, and the latter technique employs the geometric principle of increasing the amount of radiation per unit volume of tissue irradiated. Both of these techniques have distinct limitations with conventional X-rays. With the first method the increase in volume of tissue irradiated usually enlarges the normal tissue areas irradiated, and in the second method the intensity of radiation diminishes as the distance increases so that realms of practicality are soon exceeded. However, with the Cobalt beam of a 1000 curie source, a nominal increase in distance from 50 to 70cm yields a 50% increase in depth dose; and increase in field size does not increase the volume of tissue irradiated, because the scattering phenonenon with the high voltage gamma ray is predominantly forward rather than to the side as compared with conventional X-rays. Although the slight increase in distance reduces the intensity of the beam, it is still within limits of practicality of normal treatment times.

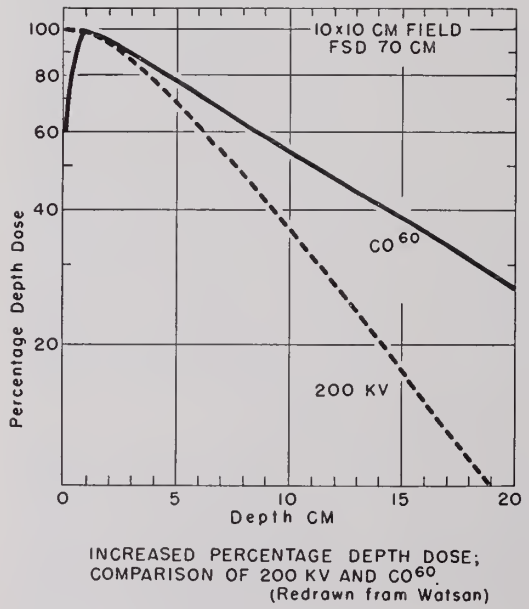


Figure 1. Comparison of percentage depth dose of 200 KV and Cobalt-60

Decreased Skin Dose

One of the limiting factors of conventional 250 KV deep therapy is the skin tolerance to radiation. The limits of skin tolerance often determine the tumor dose which can be delivered to a deep seated tumor. With conventional deep therapy in severe situations it is impossible to deliver a cancercidal dose to a deep seated tumor without producing irreparable skin damage. In some situations this may be the single factor which may be responsible for inadequate dosage to a radiocurable tumor. In most instances in which effective tumor dosage can be delivered, considerable skin damage is produced, and although it may be tolerated and not incapacitating, it always results in a certain degree of tissue damage and morbidity to complicate the radiotherapy.

With a supervoltage beam the skin effects produced by effective deep tumor dosage are negligible. There are two physical reasons for this phenomenon. The first is that interaction of the radiation of the supervoltage beam with tissues results in less photo-electron production than with 250 KV radiation. The photoelectron effect produces increased biological reaction on the skin and a more caustic effect than the Compton scattering process which is predominant in the energy range of one to two million volts.

TABLE I

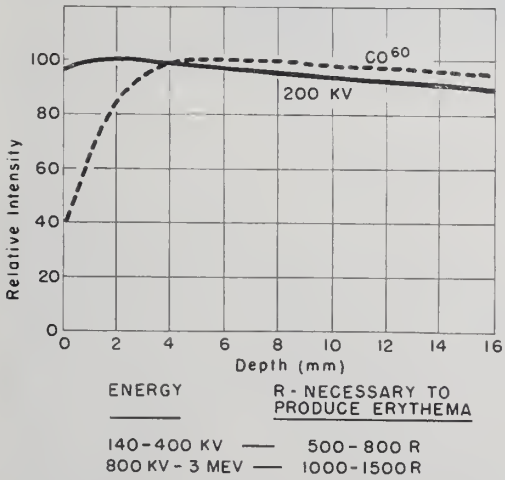
Voltage	Photoelectric Effect	Compton Effect
10 KV	100%	0
40 KV	75%	25%
1500 KV (Avg energy of CO^{60} 1200 KV)	0	100%

Table showing effect of increasing energy of radiation on components of scattering process (photoelectric effect and Compton effect) of interaction of radiation and matter

(Table 1) Secondly, the electron equilibrium of the million volt beam is greatest at approximately a 4mm depth, which is below the most sensitive layer of skin which gives rise to the well known erythema of conventional radiation therapy (Fig. 2). The threshold erythema dose as a function of the energy of the beam increases quite markedly.

Reduction in Integral or Volume Dose

The integral or volume dose received in the body as a result of radiation therapy contributes greatly to the clinical syndrome of "radiation sickness." This symptom complex is well known to all observers of radiation therapy, and the usual methods of limiting these undesirable symptoms are decreasing either the volume of tissue irradiated by limiting the treatment field size, or reducing the daily dosage. With the supervoltage beam, the side scattering in tissues is lessened and the volume of tissue irradiated decreases. Thus the total volume of tissue irradiated becomes smaller and the integral dose is reduced. This advantage of supervoltage, as compared with conventional radiation, may reduce radiation sickness in patients, particularly when large areas of the abdomen or trunk are treated. Therefore, it may be possible to irradiate larger areas through single fields, and considerable palliative benefits may be derived.



Graph demonstrating the relative intensity of radiation below the skin surface. For 200 KV the maximum is on the skin surface, for CO^{60} the maximum occurs at 6 mm. below the skin surface.

Figure 2

Lessened Absorption in Dense Structure Such as Bone or Cartilage

With a high energy beam traversing tissues of different densities, there is lessened differential absorption of radiation than when a conventional beam is used. The total energy absorption spectrum of 250 KV X-rays is composed largely of photo-electrons, whereas, in the million volt beam the electrons set in motion by the Compton process of scattering are absorbed almost equally by structures of quite different densities. (Fig. 3 demonstrates this phenomenon). This fact should reduce the incidence of bone or cartilage necrosis in those areas in which this consideration may be of some concern.

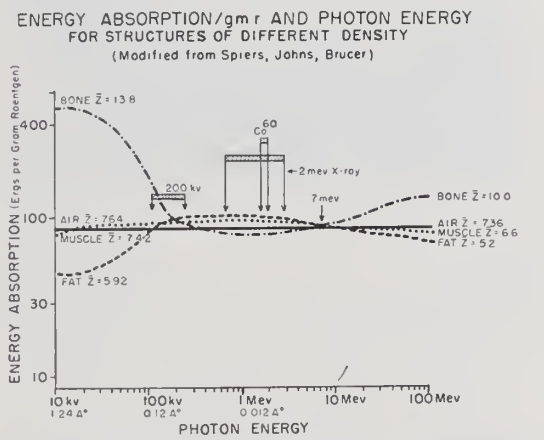


Figure 3. Graph demonstrating difference in absorption as function of energy of beam.

An additional advantage is that lessened absorption of radiation by intervening bone masses results in more accurate tissue dose determinations from reference to standard tables constructed from data secured from homogeneous phantoms. Too often, in conventional therapy, no corrections, or rule of thumb corrections gave rise to erroneous estimations of tumor dosages.

Clinical Advantages of Supervoltage

From these considerations of the physical characteristics of the supervoltage beam the clinical advantages derived may be listed as in Table II.

TABLE II
CLINICAL ADVANTAGES DERIVED FROM THESE PHYSICAL SUPERIORITIES OF BEAM

Increased Percent Depth Dose

1. Effective irradiation to deep seated lesions; more homogeneous tumor dose.
2. Effective irradiation in obese patients with radioresponsive and radiocurable lesions. (May increase cure rate).
3. Reduction in multiplicity of portals used so that irradiation is more convenient to both patient and physician.
4. In selected cases single fields can be used to give entire dose.
5. Effective irradiation to potentially curable tumors which are rarely cured by conventional means. (May increase cure rate)

Reduction of Skin Dose

1. Reduction of skin damage.
2. Inadequately treated tumors may be re-irradiated without great danger of skin necrosis.
3. Tumor recurrence following conventional irradiation may be retreated or palliated without great danger of skin necrosis.

Decreased Integral Dose

1. Lessened radiation sickness.
2. More sharply defined beams reduce volume of normal tissue treated.
3. In selected cases, advanced large tumors may be treated with larger fields to give entire dose.

Differential Absorption in Bone, Muscle, Fat

1. Decreased possibility of bone and cartilage necrosis in tumors surrounded by bone and cartilage.
2. More homogeneous tumor dose to tumors surrounded by bone.

The net results of Supervoltage Therapy may be summarized as follows:

(1) The use of Supervoltage Therapy may yield very slight improvement in cure rates in radiocurable tumors since more effective irradiation can be given than with conventional radiation equipment.

(2) The significant features are lessened radiation morbidity and decrease in dosage to normal tissue. The patient is spared some of the undesirable effects of radiation therapy.

The U of L — LGH Cobalt 60 Unit

The supervoltage unit installed recently at the Louisville General Hospital evolved from designs developed by the Teletherapy Evaluation Board of the Oak Ridge Institute of Nuclear Studies. The University of Louisville School of Medicine and some 14 other medical schools, cooperating with the Medical Division of the Institute of Nuclear Studies at Oak Ridge, pooled efforts in the design of an apparatus incorporating a radioactive isotope as a source of gamma rays, to produce a clinical unit for supervoltage radiation therapy. As a continuing program, the Teletherapy Evaluation Board will also attempt to pool clinical experiences with the unit in an endeavor to evaluate critically the results of such therapy in a broad program.

The unit is quite simple in design, consisting of a "source" which is embedded in a rotating "source wheel." These parts are totally surrounded by a thick lead shield. A small electric motor rotates the "source wheel" so that the source is brought into position in front of an aperture in the shield. Thus the beam is projected through the aperture, and is suitably collimated by treatment cones to confine and direct the beam to the areas to be irradiated. (Fig. 4).

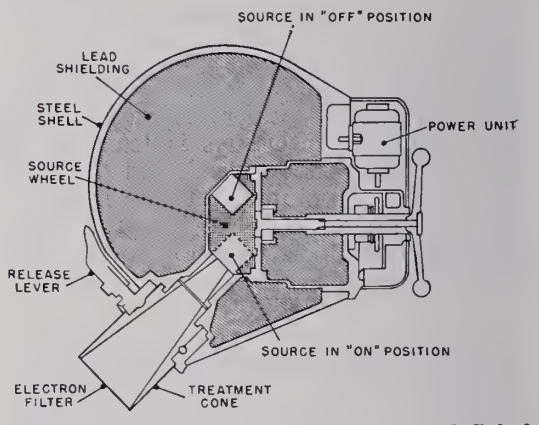


Figure 4. Schematic diagram of Head of Cobalt 60 Therapy Unit.

The lead shield, or head, is suspended by a yoke suspension and mounted to an upright stand. Vertical and limited arc motions are possible by manual controls. (Fig. 5 and 6.) The unit is housed temporarily in a ground floor area of the Louisville General Hospital, and will be permanently located in a subbasement area in a new construction now being planned. A schematic floor plan (Fig. 7) indicates the shielding requirements for adequate radiation protection. Figure 8 demonstrates the appearance of the primary radiation barrier outside the treatment

room, and figure 9 demonstrates the control and patient viewing area.

This particular unit was originally designed for 600 curies. However, it was found that it could adequately house a 1000 curie source. The unit was loaded with 979 curies in December 1954, and

Figure 5. Photograph of Cobalt Unit in use.

Figure 6. Photograph of Cobalt Unit in use.

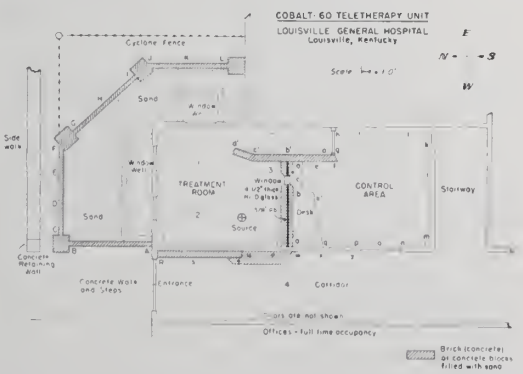


Figure 7. Schematic floor plan of Cobalt 60 Unit area indicating shielding requirements necessary.

Figure 8. Photograph of outside primary radiation barrier.

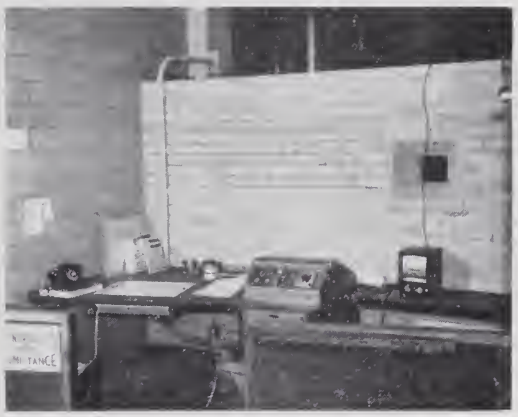


Figure 9. Photograph of controls and patient viewing area.

after thorough health physics studies, has been in active clinical use for the past 12 months.

Summary

(1) Supervoltage radiation therapy is discussed, describing the physical advantages of supervoltage compared with conventional therapy.
(2) The clinical advantages of supervoltage therapy are summarized.
(3) The U of L —LGH Cobalt 60 Unit is described.

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Fluid and Electrolyte Balance in Renal Disease

STANLEY G. DOLL, M.D.*
Louisville

Sufficient progress has been made in the application of renal physiology and pathology to clinical problems to merit the attention of all physicians. Much can be gained when the basic fundamentals are understood and are coupled with the correct application of the proper therapeutic agents now at our disposal. It has been found that persistent and meticulous attention to the fluid and electrolyte disturbance is often rewarded with remarkable clinical improvement. Renal dysfunction changes the composition of the plasma from normal and distorts the chemical structure and the volume of other body fluids, which in turn interferes with the metabolism and function of other organs. Uremia is the clinical syndrome which indicates that enough renal failure has occurred to disturb the body chemistry and distort normal function. If the underlying renal damage is not too extensive, proper therapy may control many features of the uremic syndrome. When almost total loss of function of the kidneys has occurred, not much can be done except in certain acute renal conditions. It is the purpose of this paper to discuss the fluid and electrolyte disturbances so created and to indicate what may be achieved by therapy.

It is generally recognized that the height of the NPN or of the blood urea may not necessarily be an accurate reflection of the reserve of functional renal tissue. Varied causes including post-renal obstruction, congestive heart failure, dehydration, salt depletion, excessive protein catabolism, or acute tubular necrosis may be responsible for the urea level. Before the physician gives the fateful prognosis he must discover the etiology of the uremia and treat accordingly, but if the cause cannot be removed, a trial of intensive therapy in the presence of symptoms may be rewarding. The day of widespread use of the artificial kidney with a special team to manage it seems sufficiently far off to warrant the responsible physician who treats renal disease to apply specific and thoughtful therapy to his uremic patients. It has not been shown that the length of survival using the artificial kidney is increased beyond that produced by the meticulous application of more conservative treatment.[1]

From the Medical Service, Veterans Administration Hospital, Louisville, Ky., and from the Medical Department of the University of Louisville School of Medicine.

Sponsored by the Veterans Administration and published with the approval of the Chief Medical Director. The Statements and conclusions published by the author are a result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

*Formerly, Assistant to the Chief of the Medical Service, V. A. Hospital, Louisville, Ky., and Instructor in Medicine, University of Louisville School of Medicine.

Causes of Renal Insufficiency

It is important to classify renal insufficiency inasmuch as fluid and electrolyte therapy alone may be used to the neglect of factors which if recognized and treated might afford a more favorable prognosis and shorten convalescence. Also by understanding the nature of the underlying pathologic process, certain factors and losses may be anticipated. For example, the cause of death in acute renal failure seems to be different from that which usually prevails in chronic renal disease. It has been identified as cardiac arrest by potassium poisoning. It is obvious that an accurate etiologic diagnosis must usually precede effective therapy.

Standardization of treatment without such knowledge usually is responsible for gross errors that may lessen the patient's chance for survival or for useful existence. A classification of the causes of renal insufficiency (as modified from Relman[1]) is as follows:

Causes of Renal Insufficiency

Group I Generalized Disorders with Involvement of the kidney

- (A) Vascular diseases
  1. Hypertensive vascular disease (nephrosclerosis)
  2. Intercapillary glomerulosclerosis (diabetic)
  3. Diffuse angiitis (including periarteritis nodosa and hypersensitivity reactions)
  4. Renal artery or vein occlusion (embolus or thrombosis)
- (B) Collagen diseases (lupus erythematosis)
- (C) Leptospirosis
- (D) Syphilis
- (E) Tuberculosis
- (F) Hepato-renal syndrome
- (G) Amyloidosis
- (H) Epidemic hemorrhagic fever
- (I) Blackwater fever
- (J) Leukemia, lymphoma, and mul-

tiple myeloma
(K) Necrotizing papillitis
(L) Embolic nephritis
(M) Acute tubular necrosis
1. Hemolytic transfusion reactions
2. Severe burns
3. Toxemia of pregnancy
4. Post-operative urinary suppression.
5. Crush syndrome
6. Congestive heart failure, as in myocardial infarction
7. Poisons, as mercury and protoplasmic poisons
8. Extensive dehydration
9. Prolonged shock from any cause
10. Reflex anuria
11. Carbon monoxide poisoning

Group II Metabolic Disturbances
(A) Gout
(B) Chronic alkalosis
1. Hyperventilation in respiratory alkalosis of brain injuries
2. Polio respirator cases
3. Excessive chloride loss by vomiting
4. Chronic potassium depletion
5. Chronic milk and alkali ingestion; hypervitaminosis D, hyperparathyroidism, sarcoidosis, all of which cause chronic hypercalcemia

Group III Primary Renal Diseases
(A) Acute or chronic pyelonephritis
(B) Acute or chronic glomerulonephritis
(C) Polycystic disease of the kidney
(D) Tubular dysfunction (De-toni-Fanconi syndrome and "renal tubular acidosis")
(E) Replacement by tumor

Group IV Post-renal Obstruction
(A) Calculi
(B) Prostatic enlargement
(C) Urethal strictures
(D) Pelvic and retroperitoneal tumors
(E) Congenital valves, fibrous bands, aberrant vessels

Which of these conditions are reversible in most cases should be obvious from inspection. Certain of these diseases are presently incurable whereas in others, preventive measures may be taken to avoid a recurrence or flare-up of the condition. Many of these are fundamentally irreversible, the renal failure becoming progressive and intractable. It is not within the scope of this paper to discuss differential diagnosis. Practical application of the information gained from a thorough history and physical examination, coupled with laboratory studies usually supplies the diagnosis. Rarely is it necessary to resort to such uncommon procedures as aortography or renal biopsy. A reasonable estimation of the degree of renal impairment can be made simultaneously, using the same tests.

Glomerular-Tubular Physiology

No discussion of therapy could be satisfactory without an understanding of normal glomerular-tubular function and balance. The "filtration - reabsorption" theory advocated by Cushny in 1917[2] provided a satisfactory but unproved method of correlating certain data on kidney function known at that time. This theory assumed that in an adult man about one-fifth of the plasma water with its dissolved crystalloids is filtered out and passes down the tubules. This would be about 125 ml. of filtrate per minute. The tubules reabsorb enough crystalloids to maintain a narrow concentration range in extracellular fluid. Enough water would also be absorbed by the tubules to maintain extracellular fluids at a normal level. This theory, in effect, required that about 180 liters of filtrate be formed per day by the adult man. Richards and other collaborators,[3] about twenty years later, developed a technique whereby they could puncture various portions of the tubule, withdraw the filtrate at that level and by a process of ultramicroanalysis, determine the constituents. Thus it was demonstrated that glomerular filtrate is truly a filtrate of the plasma. Other investigators a few years later applied Richard's technique to mammalian kidney tubules[4,5] to sustain the filtration-reabsorption theory in that the large quantity of filtrate occurs. It was also shown that much of the water, some electrolytes, and all of the sugar are reabsorbed before the filtrate passes through the proximal tubule. The distal tubule allows for finer regulation of water and electrolytes.

Since then other investigators have added information to show how the kidney, and more specifically the tubule, manages the delicate balance of plasma fluid and electrolyte. Urea, creatine, uric acid, creatinine, amino acids, sodium, potassium, chloride, bicarbonate, and glucose pass through the glomerular filter freely to be acted upon by the tubule cells.

Primarily, renal activity depends upon an adequate blood flow to the kidney and a satisfactory glomerular-tubular func-

tion. Tubular function and glomerular filtration are of necessity interdependent. Tubules cannot act without filtrate, and filtration without normal tubular activity allows depletion of the plasma filtrate which includes both water and electrolytes.

Ordinarily the kidneys are required to rid the body of about 35 grams of solid per day. A minimum of about 15 ml. of water per gram of solid is needed for transportation. The normal glomerular filtration is about 125 ml. per minute. The proximal tubules re-absorb about 100 ml. per minute.

The circulation in a nephron is made up of a pair of functioning arterioles, with the glomerulus interposed. The efferent arteriole enters into a second capillary bed about the tubules and finally empties into the renal veins. Twenty-five per cent of the cardiac output constitutes renal blood flow so alterations in volume of renal blood flow tend to alter the volume of glomerular filtrate.

The effective filtration pressure is determined by the difference between the hydrostatic pressure driving blood through the capillaries to force water and its solutes through the capillary wall on the one hand, and the osmotic pressure of the plasma proteins and the renal interstitial pressure resisting filtration on the other; the size of the area through which filtration takes place is also a factor. The filtration pressure is adjusted by appropriate alterations in efferent and afferent arteriolar resistances under most conditions so that the filtration rate varies little over a wide range of renal blood flow[6]. The renal blood flow may be physiologically reduced by vasoconstriction occurring in such states as exercise or orthostatic hypotension. Presumably this occurs to help in maintaining a satisfactory blood pressure to vital organs such as the brain.

By finding substances which are entirely extracted from the blood by the kidneys as the blood passes through the kidneys, and by the use of the formula UV/B, the renal blood flow is measurable. Inulin is freely filtered in the glomerulus and is neither increased by tubular excretion nor diminished by reabsorption. Thus the plasma clearance of inulin per minute would equal the glomerular filtrate, and if 600 ml. of plasma perfuse the kidney per minute and 125 ml. of plasma water are filtered, the inulin excreted per minute would be the amount contained in 125 ml. of arterial plasma. In this formula the "U" stands for the concentration in each ml. of urine of substance being cleared; the "V" equals the ml. of urine flow per minute and the "B" equals the concentration of substance being cleared in each ml. of blood. This formula gives the clearance figure representing renal blood flow per minute. Diodrast and sodium para-aminohippurate (PAH) are other substances commonly used to determine the renal blood flow per minute.

If the lining of the tubular membrane were passive in the sense that the glomerulus is, the urine would have the same composition as the glomerular filtrate. This is not the case, however, for as is known, the glucose has disappeared and the concentration of urea has increased 50-100 times. These changes are brought about by the activity of the tubules. Some substances are present in greater concentration in urine than in the blood whereas the reverse is true with others. Yet the glomerulus may have filtrated all of these components. Urea, uric acid and creatinine are mainly removed by filtration.

About 180 liters of filtrate are presented to the tubules in a 24 hour period during which one or two liters of urine are normally produced. The tubules reabsorb the difference. Before the collecting tubules are reached, chemical regulation of body fluid has been achieved by a process of selective reabsorption and excretion. Those substances for which the body has no further need, such as urea, creatinine, and uric acid are excreted. Some substances such as glucose and amino acids are reabsorbed almost completely.

Hormonal mechanisms are at work to integrate tubular function. The pituitary secretes an anti-diuretic hormone that stimulates tubular reabsorption of water. If this hormone is lacking the daily urinary flow may be measured in gallons. Adrenal cortical hormones regulate the activity of the tubules in reabsorption of sodium and potassium. Diabetes insipidus and Addison's disease are clinical examples of a lack of specific hormone which may result in dehydration and electrolyte loss.

The transfer of substances across the tubule depends on at least three factors: duration of contact between the tubular cells and the filtrate, the osmotic pressure of the filtrate, and the concentration of constituents in the filtrate. Certain transfer mechanisms and enzyme activity are necessary for proper tubular function. No transfer mechanisms in case of reabsorp-

tion of electrolyte have been noted, however[6].

Transfer mechanisms are catalyzed by enzymatic activity and are suspected of being responsible for the excretion from the blood of many unknown toxic and benign substances. Vital dye tightly bound to the plasma protein can be shown to enter the cells from the tubular urine, presumably as a result of the activity of reabsorptive mechanisms[7]. Plasma creatinine and H-ion are naturally occurring substances found[8,9] to be definitely excreted by the tubules. This is known because analysis of filtrate at various tubular levels shows excretion into the urine to exceed that being filtered. Phlorizin, an enzyme inhibitor, can be used to paralyze the tubular-transfer-reabsorption mechanism of glucose with glycosuria then occurring at low blood sugar levels.

It is known that there is a maximum tubular reabsorptive capacity in that if a large amount of one substance has to be removed, it may be excreted while other substances are not. There seems to be competition for use of these transfer systems.

The known factors which limit the substances excreted by the tubules are the competition of these substances and the amount of available enzymes needed for catalysis. Substances of the glomerular filtrate are treated singly by tubular cells; some are reabsorbed, some flow down unaltered, while some substances are added to the filtrate by tubular excretion.

In the distal tubule, selective and non-obligatory reabsorption of water allows concentration of urine against an osmotic gradient making the urine hypotonic or hypertonic as happens to be necessary. This work of the kidney increases sharply as the volume of the 24 hour urine falls below one liter. This is done so that body water may remain normal.

Summarizing the tubular action upon the normal 125 ml. of glomerular filtrate per minute, the proximal tubule reabsorbs 90% of the water, sodium chloride, and sodium bicarbonate as well as most of the calcium. Forty per cent of the urea may be reabsorbed. The distal tubule allows for selective reabsorption of water and other electrolytes as needed by the body, including bicarbonate, calcium, potassium, sodium, and chloride ions. Also the exchange of hydrogen and ammonium ions within the tubule cell is made for the sodium and potassium from the tubule lumen in order to preserve these important ions. About 400 grams of sodium bicarbonate are presented for excretion daily[2], yet only about 0.2 gram of this base is actually excreted so that a normal bicarbonate reserve in the plasma and interstitial fluids can be maintained. This leads us to a discussion of the mechanisms of maintenance of stability of body fluid pH.

Maintenance of Stability of Body Fluid pH

In man and carnivorous animals, acid production is greater than alkaline production. If the surplus acids such as sulphuric, phosphoric and others were allowed to accumulate, the bicarbonate reserve of the plasma and interstitial fluids would be depleted and cause a drop of the pH to a fatal level.[2]

Body fluid pH is maintained with precision by three physiologic defenses: blood buffer systems, respiratory control of CO_2 and the kidneys. The renal control is a slower mechanism but is more selective in that it must eliminate excess acid and base while simultaneously conserving an adequate amount of base and bicarbonate. The term "acid-base balance" implies balance between the anions ("acid") and cations ("base") in body fluids. At normal levels (pH equals 7.4 plus or minus 0.05) the plasma is chemically alkaline, not chemically neutral.

Supposedly, vital cell function is dependent upon precise maintenance of body fluid pH, with small fluctuations readily calling upon one of three general defenses. The chemical buffers of the body fluids serve to neutralize acids or alkalis which are produced within, or gain access to the body. The respiratory system, by gross elimination, regulates the concentration of the major acid end product of metabolism, carbonic acid (as CO_2). Renal regulation is the most crucial of all maintenance mechanisms for control of the pH because it must compensate for any defects in the buffer and the respiratory system.

The plasma buffer system is based on carbonic acid dissociation. Carbonic acid ionizes to form $H+$, and a bicarbonate ion, HCO_3. The bicarbonate combines with ionized base (usually ionized sodium) to serve as available base (or "alkali reserve"). Thus when the equilibrium shifts to produce an increase in bicarbonate-bound base and a decrease of carbonic acid, the pH is increased, making the plasma more alkaline. Ionized sodium (142 mEq. out of 154 mEq, of total base) is us-

ually referred to as the available base capable of being bound to bicarbonate. The Henderson-Hasselbalch equation represents the constant at any moment of acid-base balance:

$$pH = 6.1 \text{ plus } \frac{BHCO_3 \text{ (base bicarbonate)}}{HHCO_3 \text{ (carbonic acid)}}$$

In the great majority of instances the primary factor involved in shifts of acid-base balance is the metabolic increase or decrease of the alkali reserve as determined by measuring the CO_2 combining power.

Pulmonary dysfunction in the handling of CO_2 can produce acid-base alterations independent of metabolic changes[10]. Here, an increase in carbonic acid concentration leads to primary CO_2 excess (respiratory acidosis), and a decrease in carbonic acid concentration leads to primary CO_2 deficit (respiratory alkalosis[11].)

The pH of the plasma is not determined on bicarbonate concentration alone but by the ratio denoted by the Henderson-Hasselbalch equation. Therefore bicarbonate measurement alone is not an adequate basis for judging acid-base status unless supported by measurement of pH. Clinical awareness of this fact is important because in metabolic acidosis the plasma bicarbonate (CO_2 combining power) is low, whereas in respiratory acidosis the plasma bicarbonate is usually high.

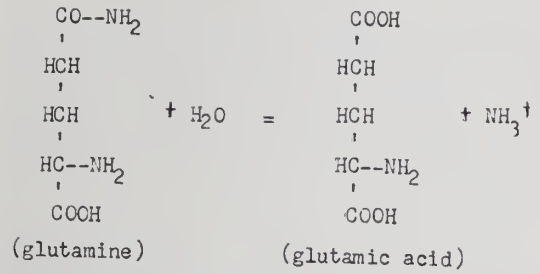
Despite the importance and usefulness of the respiratory and buffer mechanisms for the maintenance of pH, Fourman states that the metabolic disturbance is, in the end, corrected by the renal adjustment and this requires that the stores and supplies of sodium and water be normal, so that the kidneys may function normally[12]. Cushny's theory of renal function dominated thought concerning kidney physiology for almost thirty years. The renal tubule was not considered to perform any significant excretory function. Pitts and associates[13,14] were among the first to realize the importance of tubular excretion in renal regulation of the body fluid pH when they produced a metabolic acidosis by administration of ammonium chloride. The titratable acid found in the urine exceeded that which could have been filtered by the glomeruli at maximum efficiency. This showed that H+ ions from the tubule cells must have been exchanged for base ions (sodium) from the urinary filtrate with consequent excretion of the H+ ion and conservation of sodium. Pitts also showed that when inhibition of the carbonic anhydrase mechanism interrupts the supply of H+ ions, cellular potassium ions are excreted in substitution[15]. The kidney excretes acid anions without loss of fixed base primarily by two means: the bicarbonate mechanism and the excretion of ammonia[16]. Another mechanism for reduction in body acid is the actual excretion of free acid by the tubular epithelium, or the exchange of hydrogen ions by the tubular cells for ions of sodium and potassium from the glomerular filtrate[17]. Montgomery and Pierce [18] have shown in the amphibian kidney the fall in pH occurs in the distal tubule.

If excess cation is present H+ ion excretion and bicarbonate reabsorption are decreased with chloride ion being more efficiently reabsorbed into the blood. Increased disodium phosphate in the tubular urine is a strong stimulus to excretion of H+ ion to replace the sodium ion. An example of the "intelligent" exchange by the kidney in the excretion of excess acid with conservation of bicarbonate-bound base may be seen in the equation:

$$\underset{\text{(filtrate)}}{Na_2HPO_4} + \underset{\text{(tubule)}}{H_2CO_3} \longrightarrow \underset{\text{(reabsorbed)}}{NaHCO_3} + \underset{\text{(excreted in urine)}}{NaH_2PO_4}$$

It is noted that bicarbonate bound base is reabsorbed and an acid substance (pH 4.5) is excreted in the urine. The phosphates are used in the example but the carbonates, sulfates, proteins, and organic acids may thus be excreted with the aim of carrying from the plasma to the urine the excess of these end-products of metabolism. Carbonic acid is the source of the H+ ions required for this exchange. This is manufactured in the tubular cells by the reaction of CO_2 and cell water under the control of an enzyme, carbonic anhydrase[19].

The ammonia is formed in renal cells. Nash and Benedict[20] demonstrated in dogs with acidosis that the ammonia content of the blood in the renal vein was greater than the ammonia content in the arterial blood. The chief source of the ammonia is the amide nitrogen of free glutamine in the blood[21]. The following equation shows the effect of an enzyme on glutamine to release glutamic acid and NH_3+:[2].



(glutamine) (glutamic acid)

The chemical equation for the ammonia combining with bicarbonate to form ionized ammonium bicarbonate to react with sodium ions in the filtrate is given[11]:

(filtrate) (tubule cells) (reabsorbed) (excreted in urine)

The $Na+$ and HCO_3^- ions are reabsorbed into the body.

Mechanisms of Fluid and Electrolyte Disturbance in Renal Disease

The operation of the kidney is dependent on normal blood flow through the kidneys, adequate filtration through the glomeruli, and functional integrity of the tubule cells. If glomerular filtration rate is markedly reduced, changes result in the volume and chemical constituents of the urine and plasma. Exercise diverting blood from the kidney, loss of fluid from the bowel, whether it be by diarrhea, gastric or intestinal intubation and suction or vomiting, inadequate fluid intake, excessive perspiration, anemia, shock from any cause, or heart failure all may be factors which do not permit a satisfactory volume of glomerular filtrate. Fever of any cause[22] causes vasodilatation in man and may increase glomerular filtrate.

In glomerulonephritis fibrosis may distort the pattern of the vascular tree and by compression or angulation, occlude or obliterate blood vessels. As the disease progresses, the vascular bed is not only deformed but reduced in size. Inflammatory changes in the vessel walls appear in the course of chronic pyelonephritis and chronic glomerulonephritis and may lead to thromboses and occlusion. Intimal proliferation associated with arteriosclerosis causes a reduction in flow through the vascular bed.

If there is a marked decrease in glomerular filtration the tubules must compensate and a greater load is imposed on the transfer mechanisms and enzyme activity. If this decrease in glomerular filtration is of sufficient duration and magnitude the tubules may be unable to maintain homeostasis, with consequent alteration of the volume and structure of extracellular water, which in turn allows for similar alterations in the intracellular fluid. Once the metabolic activity of the cells has been altered, symptoms become manifest. Various enzymes throughout the body are affected and a progression from bad to worse ensues. Other organs which help to maintain homeostasis become damaged and further aggravate any existing renal lesion, with drop in blood flow through the kidney. Any disease which obstructs the renal lymph channels increases the interstitial renal pressure, thus decreasing the glomerular filtration rate and causing unsatisfactory clearance of certain substances from the blood.

If plasma creatinine is increased, it denotes decreased filtration and/or decreased tubular excretion because it is partially excreted by the tubules. Uric acid may be elevated in eclampsia from excess protein catabolism, decreased glomerular filtration, or increased tubular reabsorption. Practically all types of renal disease damage all parts of the kidney, with variations depending on the disease process.

Conservation of water for the body is dependent on the action of the kidney in elaborating urine which is osmotically more concentrated than the blood. Hypertonicity of the plasma is normally offset by excretion of a still more concentrated urine.

In the filtrate are many substances, some of which must be reabsorbed lest their loss in such quantity be greater than the body could tolerate. It is the job of the tubules to handle this fluid properly. If the concentration of substance in the glomerular filtrate is low, or the duration of contact between tubule and filtrate is decreased, or if the osmotic pressure of the filtrate is high, the tubules even though functionally intact, may be unable to handle the load properly, allowing an undesirable loss of fluid and electrolyte. Oliguria and anuria result when filtration diminishes or stops, with tubular reabsorption including most or all of the filtrate. This occurs in acute tubular necrosis (lower nephron nephrosis) and in chronic glomerulonephritis. If the proximal tubules are damaged so as to fail to re-absorb their usual increment of filtrate, more filtrate passes into the distal tubule, causing polyuria. This results from an increase in rate of flow with a

decrease in exposure time of the filtrate to the tubules. A hypotonic urine may result from a relative increase in filtration beyond tubular capacity to reabsorb water, or may result from tubular damage rendering cells incapable of responding to hormonal or chemical stimuli which dictate the necessary degree of water reabsorption. If the filtrate flow is slow enough, damaged tubules might be able to do a satisfactory job but if not, and they lose their ability to reabsorb across an osmotic gradient, the filtrate is not concentrated.

If the tubules are unable to concentrate the filtrate, a larger volume of water will be required to carry the 35 grams of solids which must be excreted daily. Eventually the polyuria results in very significant losses of both water and electrolytes. Water and electrolytes may be depleted or retained, independently or simultaneously. If the extracellular water is hypertonic, fluid is pulled from the cells. In simple water loss or hypertonic dehydration, a result of polyuria, there may follow an abnormal loss of potassium from the cells[6].

Total body water may remain at a satisfactory volume but changes in osmotic pressure can produce abnormal distribution of fluid between cellular, interstitial, and extra-cellular compartments. If the cells are depleted of fluid, thirst results. If extra-cellular water loses osmotic pressure, fluid is pulled into the cells resulting in decrease of plasma volume and if extensive enough, peripheral vascular collapse ensues. This is seen in salt-losing nephritis wherein electrolyte loss is relatively greater than water loss. In order to maintain isotonicity, water moves from the extra-cellular (hypotonic) compartment to the area of hypertonicity, the cells[6].

The tendency of patients with renal disease is to take enough water but insufficient sodium. The main mechanism of acidosis (seen most frequently in long term renal disease) is primary alkali deficit from renal depletion of extra-cellular sodium.

The usual mechanisms by which base is conserved fail for several reasons; glomerulo-tubular imbalance with tubular diuresis shortens the time of contact between the filtrate and tubular cells in the proximal segment and, as a result, sodium reabsorption is inadequate. A greater burden is then placed upon salvaging mechanisms in the distal tubular segment, but these are already disturbed by disease and they prove unequal to the task. Ammonia production ceases, possibly because of some enzyme inactivation[23]. The glutamine content is decreased in the nephritic kidney[24]. As a result of these changes alkali conservation fails and the plasma sodium level falls.

With sodium deprivation and loss, chloride and bicarbonate are also lost. Hypochloremia allows for an increase in the organic acids which result from tissue catabolism as might be expected from anorexia accompanying the disease. Sulfate and phosphate anions are increased by virtue of a decrease in filtration; these displace the bicarbonate still further.

Experiments with carbonic anhydrase inhibitors in rats showed that glutaminase activity, rather than the pH of the urine paralleled the rate of ammonia excretion[25]. Thus it would appear that the degree of acidosis per se does not determine the rate of ammonia excretion. In renal disease there is often an inhibition or deficiency of renal carbonic anhydrase which effects a reduction in the amount of competing H ion available to exchange in the base-conserving mechanism.

Richards in 1929 observed under a microscope, blood circulation and filtration of the nephrons of frogs which were given nephrotoxins. The filtrate was seen to be reabsorbed in the tubules with resultant anuria[26]. Studies which were initiated during World War I[27] on the shock syndrome have been expanded to show that a variety of clinical states (see outline of causes of renal failure) have shock of varying degrees as a factor. Van Slyke and collaborators,[2] by producing shock from slow hemorrhage, were able to show that renal shut-down appeared before the pressure in the femoral artery had gone below 80 mm. Hg. In their experiments the sacrifice of renal circulation occurred after the volume of blood drawn was 48 ml/Kg. Then renal blood flow and the excretion of creatinine and hippurate rapidly fell to zero. Evidence showed that such ischemia injures the tubule cells and causes the tubular failure that follows severe prolonged shock. They also showed as anticipated in tubular paralysis, that there is a failure in the discriminatory excretion of water and the individual electrolytes required to maintain constant volume and composition of the body fluids. Various investigators[28,29,30] have shown that ischemia produced in rabbits and dogs by transitory occlusion of the

renal artery causes renal failure depending on the degree and duration of occlusion, the functional effects upon fluid and electrolyte handling resembling those seen in partial or complete failure coming on after shock. Van Slyke[2] suggests the following sequence of events in renal tubular failure of shock: "Ischemia during shock injures the tubular cells, with immediate more or less complete loss of their function. Recovery from the shock is followed by restoration of renal circulation, presumably with recovery of glomerular filtration, but tubular failure persists, with the indiscriminate reabsorption of water and solutes noted by Richards and Bywaters and Dible. During several days the damaged cells develop lesions, including the herniations described by Oliver. Also, renal edema develops, perhaps from leakage of fluid into the interstitial tissue from the broken tubules. As a result of the pressure caused by the edematous swelling of the kidneys, renal blood flow is again diminished, and a parallel fall in glomerular filtration rate adds its effect to tubular failure in decreasing the excretory ability of the kidney."

Alkalosis is rare in renal disease but it may occur and if it is of appreciable degree, intra-cellular potassium is decreased. If the patient with chronic renal disease vomits gastric secretions which are acid (most of the time these patients have hypochlorhydria), a metabolic alkalosis results because sodium shifts into the cell as a compensating measure serving to reduce the elevated HCO_3-. Because of the delicate intracellular cation balance, an equivalent potassium loss must occur to the extracellular water which is presented to the kidney for excretion, which it may or may not do depending on the type and degree of renal dysfunction.

Potassium may be lost from the cells to the extracellular water in simple water loss in renal disease. This appears to be part of the mechanism of compensation whereby the large volume of intracellular water with potassium is made available to the extracellular water when volume of the extracellular compartment is diminished.

In prolonged renal disease the blood calcium is often low due to the increase of inorganic phosphorus and poor gastrointestinal absorption. The poor absorption of calcium is related to decreased gastric acidity caused by acidosis. Damaged renal tubules limit the amount of base (sodium) available for neutralization and calcium will appear in increasing amounts in the urine as a compensating measure. This calcium loss results in a secondary hyperparathyroidism and is clinically known as renal rickets when an increased reabsorption of bone results in demonstrable demineralization of the bones.

(Continued in January Issue)

Manuscript Memos

Manuscripts should be submitted in duplicate to the Journal of KSMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words, and the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

Footnotes and bibliographies should conform to the style of the Quarterly Cumulative Index Medicus published by the American Medical Association. This requires in the order given: name of author, title of article, name of periodical, with volume, page, month—day of month if weekly—and year. The Journal of the KSMA does not assume responsibility for the accuracy of references used with scientific articles.

All scientific material appearing in the Journal is reviewed by the Board of Consultants on Scientific Articles. If illustrations are submitted with a paper, the Journal will assume the cost for the first three one-column width half tones. The cost of additional illustrations will be borne by the essayist.

Arrangements for reprints of an article should be made directly with the publisher of the Journal, Mr. J. G. Denhardt, Times-Journal Publishing Company, Bowling Green, Kentucky.

Please mail your scientific articles to the Journal of the Kentucky State Medical Association, 620 South Third Street, Louisville 2, Kentucky.

CASE DISCUSSIONS

THE UNIVERSITY OF LOUISVILLE HOSPITALS
FROM GENERAL HOSPITAL

Case No. 37385

Presentation of the Case

This thirty-four year old single, colored female was well until approximately October 1, 1954 when she noticed a slight, left-sided sore throat, which persisted for several weeks, with tenderness in the left submaxillary region. A physician noted injection of the left anterior tonsillar pillar, and she was given aspirin. Two weeks later, for similar complaints, she was given antibiotics and APC tablets. Symptoms persisted; her sore throat increased, and two months later increased injection of anterior tonsillar pillar was noted. A consultant diagnosed lingual tonsillitis, and treated her with penicillin for several weeks, without improvement.

Four months after symptoms began she had difficulty in opening her mouth fully. She was re-examined and an ulcerated area on the lateral border of the tongue, at the base of the anterior tonsillar pillar on the left, was noted; it was suggested that "observation for infectious or neoplastic disease" be carried out. A consultant then diagnosed "acute tonsillitis bordering on peritonsillar abscess"; another course of penicillin was administered, over a period of two weeks, without improvement. Her pattern of clinic visits was again repeated during the month of June, 1955. She developed complaints of headache and increasing trismus. Still another diagnosis of follicular tonsillitis was made, and a fourth course of antibiotics was administered with no improvement. At long last, on June 21, 1955, a biopsy of the ulcerated lesion on the tongue was done. This was reported as "squamous cell carcinoma." This was eight months after the first appearance of her persistent sore throat. A definitely tender swelling appeared in the left subgastric region of the neck. At the time of this diagnosis the patient had lost twenty-six pounds of weight, and she was unable to open her mouth more than 2 cm. She was admitted to the Louisville General Hospital on June 24, 1955.

PAST HISTORY: Primary lues in 1938, treated in the clinics of the Louisville General Hospital; serology was negative in 1951 and 1955. The patient had smoked one-half to one package of cigarettes a day for a period of about twenty years.

FAMILY HISTORY: Family history revealed no known cancer.

PHYSICAL EXAMINATION: Physical examination revealed a thin, chronically ill, colored female who talked indistinctly through jaws that could not be opened more than 1½ cm. She could not protrude her tongue adequately due to fixation of the posterior portion. The anterior edge of an ulcerated lesion, covered with a necrotic slough, could be seen beginning on the left lateral border of the tongue, about 3 cm. from its tip, and extending backwards. Further posterior tongue and pharyngeal examination was impossible because of the trismus. The left submaxillary gland appeared enlarged and was somewhat tender and hard. A 1-cm., left sub-digastric node was palpated, which was slightly tender. The remainder of the examination was not remarkable except for a 4-cm. cystic mass in the right adnexal region, believed to represent a hydrosalpinx or ovarian cyst.

Under anesthesia, it was determined that the lesion measured approximately 5x3x3 cm. It involved the body and base of the tongue, the anterior tonsillar pillar, and a portion of the tonsillar fossa, but its edge was about 2 cm. away from the epiglottis. It was felt, from palpation and from the patient's symptoms of marked trismus, that invasion of the pterygoid musculature by the tumor had occurred, and it was felt also that the posterior left floor of the mouth had been invaded, with extension of the tumor into the posterior submaxillary space. The tumor was in direct contact with the posterior horizontal ramus and angle of the mandible. While a 1-cm. node was palpated in the left neck, several examiners did not believe that this represented a metastatic node.

LABORATORY FINDINGS: Non-contributory.

Figure 1. Photograph taken three months following operation. There is some keloid formation in the scar of the lower neck.

X-rays of the mandible showed no bony destruction.

Management

At Tumor Conference it was felt that because of the extensiveness of the tumor, and particularly because of invasion of the pterygoid fossa, there was no very great chance for cure. It was felt that surgery, although necessarily extensive, would offer her relief of pain and relief of trismus, thus enabling her to eat and be comfortable. Therefore, she was prepared for operation and given a high caloric, high protein, liquid diet which she swallowed very well. Surgery was somewhat delayed because of trouble in obtaining blood for transfusions during the operation, but about two weeks following her admission, the operation was undertaken.

The operation consisted of resection of a large portion of the tongue, including the base of the tongue, the left tonsillar area, anterior tonsillar pillar, most of the pterygoid musculature in this region, resection of the posterior half of the horizontal ramus of the left mandible, plus the entire ascending ramus, and a left radical dissection in continuity, plus a tracheostomy. The operation required approximately six hours to perform, and three pints of blood were administered during the procedure.

The patient progressed fairly well postoperatively. Her mouth and pharynx suture lines healed by primary intention without separation or fistula formation. Her cheek and lip on the side of the operation showed some edema for a period of about ten days, and this gradually improved. The tracheostomy tube was changed on the fourth day and removed on the ninth day. She was given tube feedings with a tiny, plastic, nasogastric feeding tube on the first postoperative day. This was continued until the twelfth postoperative day, at which time she began to swallow fluids adequately and tube feedings could be discontinued. She was discharged on the eighteenth postoperative day, healed well, swallowing well, and comfortable. On three subsequent visits to the clinic she has continued to be comfortable, has been on a liquid diet, of necessity, because she cannot chew, has begun to gain weight, and is performing her usual household duties.

Final Pathological Report: "Squamous Carcinoma of Tongue."

Discussion

Question: What important lesson can be learned from this patient?

Condict Moore, M.D.: The importance of biopsy of all lesions which fail to heal within *one or two weeks*. All too many cancers progress, as this one did, under repeated observations, antibiotics, etc. Early biopsy would have saved this patient much suffering and perhaps given her a cure rath-

Figure 2. Photograph at same time as photograph 1, demonstrating ease with which patient opens her jaws. There is some drift of the mandible to the left side due to the absence of the left half of this bone.

er than a nearly hopeless ultimate prognosis.

Question: Would X-ray therapy have been a better and easier form of treatment for this patient since cure was not considered likely?

Herbert D. Kerman, M.D.: This patient has trismus and pain which would indicate involvement of the pterygoid fossa. X- ray therapy would probably not afford much hope of complete cure, and although it may offer some relief of pain and palliation of trismus to a degree, this method of treatment would relieve these symptoms slowly. Surgery should relieve the pain and trismus promptly, and if a recurrence should take place this would probably be a local recurrence to which local intensive radiation could then be delivered.

Question: Why was a radical neck dissection done when it was not felt that metastases were definitely present in the neck?

Condict Moore, M.D.: So much dissection had to be done in the submaxillary area of the neck that it was felt that only an hour and a half more of operating time was necessary to do a complete neck dissection: also, a complete neck dissection could not be done cleanly at a later date if metastases should make their appearance. Thirdly, although this is a theoretical reason perhaps more applicable to more curable patients, the incidence of metastasis in this type of tumor to the neck is so high (60-70%) and the chance of cure in the face of metastatic disease so much better when the metastases are microscopic and not grossly palpable that a neck dissection is considered to afford better chance for control when done routinely.

Question: Can the patient swallow and talk at all satisfactorily after such extensive resection of the tongue and throat?

Condict Moore, M.D.: Swallowing is nearly normal for these patients. Speech is slurred but friends and acquaintances understand this patient perfectly; she speaks freely and without embarrassment.

Question: Could this lesion have been diagnosed six to eight months earlier if it had been suspected?

Condict Moore, M.D.: Yes, in all probability. However, it is the usual history in mouth cancer patients that a persistent sore throat has not caused early suspicion of carcinoma with immediate biopsy.

Question: Is it not very unusual to have cancer of the mouth in a person so young?

Condict Moore, M.D.: It is somewhat unusual to have cancer of the mouth in a person so young, but not at all rare. Many doctors believe that adequate chronic irritation in a susceptible individual for a period of fifteen to twenty years, or more, can produce squamous carcinoma no matter what the patient's age.

Question: How and where would you expect a recurrence and how would it be treated?

Condict Moore, M.D.: Recurrence may be anticipated in the mouth and throat area. Surgery has gone as far as it can go. Subsequent disease must be treated with radiation in its various forms as indicated by the location of the recurrence.

SPECIAL ARTICLES

PRESIDENT'S ADDRESS*

CLYDE C. SPARKS, M. D.

Ashland

For the past several years we have had the privilege of serving the Kentucky State Medical Association in various capacities. Last evening it was my pleasure to bring an annual report to our elected delegates in business session, and today I am to be permitted an even greater pleasure, when by virtue of the office you have asked me to fill, we speak to the general membership assembly.

We wish to speak to you out of an experience of service, dominated by a desire to serve and never by a desire for personal aggrandizement. From this experience we hope to say something that may be utilized as an instrumentality in making our Association go forward fulfilling the obligation of service to the members and the public in an even greater way than we have done in the past.

Customarily, before a new administration assumes responsibility, an inventory is taken and the parties concerned informed of its contents. Perhaps this morning our thoughts should be directed to an inventory of the Kentucky State Medical Association as we have found it in the past years and, with your permission, we shall present to you a partial such inventory, considering some of the potentialities for improved leadership in the future.

An inventory of our present position in public relations is of interest. We have, in the past few years, done a very creditable job in an organized way relative to conventional public relations. Various approaches have been used. Many of these are suggestive to some lay people that we are a bad group not willing to police ourselves. This will be discussed further in a few moments. We must remember that in spite of the great faith people individually have in their personal physicians, they are at the same time collectively much concerned about many problems. Often these problems are more fancied than real, but none the less real to the patient. These fears cannot be dissipated entirely as long as the human element exists, but they can be eased or improved by careful work of individuals and county society units devoted to such a program. More close personal contacts and a program which lets people know we are interested in them is the answer. It is not necessary to cringe, defend, and placate. It is necessary to create determined, progressive programs.

We hope in this respect to see the day soon when ours, and other associations, will cease accepting unhealthy programs presented as good public relation vehicles, or politically expedient ventures, when they are opposed to the basic principles we are devotedly committed to follow. We can be told a thing often enough until we get to believe it to be true. Let us remember it is not necessary to sacrifice principle for expediency unless we are willing to accept a poor reason for its doing.

We do not believe the people of this commonwealth desire to be wards of the public coffers in medicine any more than they do in housing, food, or any other sense. Neither do we believe it is good to train our youth in that direction. We must either be for socialism or against it as an organization. The physicians of Kentucky want everyone to have all the necessary care and want also the people to ask for what they need irrespective of their abilities to pay. This is true of all medical care, including immunizations. Ventures into expediency can possibly place us in the position of trying to learn how to want the things we got which we did not want in the first place. We are neither ready to be made into machines nor to accept assembly line medicines for our people. We do not in any sense want to defend any unscrupulous individuals in our group.

Our inventory shows on a national level an increase in the number of men, on policy influencing committees, who are engaged in the care of the sick. This is a healthy and welcome condition and will, we hope, continue. We have the utmost respect for men who have devoted their lives to institutional work, such as educators, public health men, research men,

*This address was delivered at the 1955 Annual Meeting.

administrative medical men, and all those who have filled a place requiring a medical background. However, at the same time, we must remember that they cannot by themselves reflect the thinking of people who are ill. That particular problem is best understood by men actually engaged in the care of the sick. This does not mean to imply in any sense that these men are socialistic in their thinking; in fact, some of the most loyal men to the free enterprise system are people from this group. The difference lies in the close personal contacts they have or have not had the opportunity of having with people who are ill. If we pay enough attention to this particular phase of our work, we will find a more fruitful and harmonious program being promulgated, and we may be able to avoid a repetition of the many misunderstandings that came early in the days of he United Mine Workers' welfare program.

If we are to strive for the principle of medical men for the majority of medical jobs, as discussed above, we must, as an association, accept the responsibilities inherent to such a system. Specifically, we must police ourselves in a way that is just and not in a way that would be dictated by political expediency. This would be most expeditiously initiated by creating a Board of Medical Examiners in Kentucky, separate and apart from the State Board of Health. This should be governmental and not political in nature, and we recommend that this be added to the assets of the Kentucky State Medical Association inventory.

We note with a great deal of satisfaction, an increase in the attention to education. We are doing a good job in improving both the quality and quantity of medical education. Post-graduate education, attention to the humanities, as well as joint educational undertakings with allied groups, such as the rural health movement and the allied health councils, have come into their fair share of attention in the last few years. We note, as our inventory proceeds, that we have done a good job in our educational system in this country as far as vocational guidance is concerned, but we have on the liability side of our ledger notations that indicate very little has been done towards teaching vocational understanding. Is it, then, any major surprise that people resent what they do not understand and fear the things they are ignorant of? This must work for all of us, whatever field of endeavor we may be engaged in.

So many of our problems could be solved if our people could understand, not what they might think a doctor is for, but what his role in the community actually is. We could all profit if such a program were integrated with our public educational system, and we believe that the doctors of Kentucky should seriously consider advocating such a program. Organized medicine in the United States is solidly dedicated to increasing the quality and quantity of medical education, but the responsibility goes even farther. We, as individuals, cannot permit ourselves to cease learning. We must continually teach ourselves, our professional associates, and our lay people. This is particularly true if we are to guide a normal social evolution and not be in the position of trying to combat an abnormal social revolution.

In the list of assets discovered in our inventory, is the one of accepting our responsibilities of leadership in pointing out to our people the status of the indigent medical care program in Kentucky and offering a solution for its improvement. The value of making and reporting this study and our findings is far greater than the partial solution of the indigent care problem. It is clear evidence that, in addition to accepting responsibility of leadership, we physicians of Kentucky are not afraid to discuss our problems with lay groups, we have no fear of local governments, and realize that if we keep on the right road, performing our duties as a service organization, nothing can destroy or harm us. Fear is a poor motive for achievement.

Mentioned earlier, was the fact that the Kentucky State Medical Association is a service organization, and not the least of its activities is the scientific assembly at which time it becomes a service organization bringing together its members to discuss practical medical problems and to hear presented advances in medical science from other men throughout our nation. This service reflects in an improved scientific care for our patients which, connected with increased hospital facilities and more available transportation, makes distribution of medical personnel some less important, and improves the quality and accessibility of medical care.

We must realize that in the shifting trends in this country, more and more care is being given in the hospitals and less in the home. This is good if we remember that on the liability side there again is the tendency to treat people as

machines. Some place along the line the American people lost some of the niceties of living, and this has been reflected in the attitude toward disease. We would be the last to hope for a return to the drawing-room type of medicine or medicine as an art only, but we are delighted to report to you today that there is no reason why we cannot treat the disease remembering that there is a patient attached to it, and that we are seeing signs of this philosophy of medicine being in the ascendency.

When we speak of service we think of giving. Medical men are called on often to give of their tangible substance, and for the most part they have done reasonably well in that regard, but please let us remember that in speaking of giving, we give little when we give of our possessions, but give truly when we give of ourselves. It would be my prayer for us in regard to service and giving, that first we deserve to be givers and instruments of giving, secondly, that the receivers may know we give with joy and not with pain; and yet the giver must not be overmindful of their debt; and thirdly, we should remember that it is well to give when asked, but better to give through understanding of our fellowmen and give unasked.

When we think of giving as we did in the immediately preceding paragraph, we must also follow that with some thinking relative to faith. Our inventory shows faith to play perhaps the greatest role of all factors in our medical care system in this country. It is remarkable how people allow us to do things to them with little or no previous contacts with us as individuals. By the same token, we must wonder if we have as much faith in the public as they have in us. We have made real progress in having our medical organizations held in higher esteem, but in a country where the Christian religion is based on faith in a man, we wonder if we are doing all we should to maintain the justification of this relatively blind faith people have in us as individual doctors. If we have proper faith in people, they may disappoint us at times, but we will be in whatever position we justly deserve to be when the final pages of our professional destiny are written.

Our inventory continues with knowledge concerning the problem of the chronically ill on our asset side of the inventory, and a liability as far as the economic health of our people is concerned on our inventory table. The problem of the chronically ill has been a natural development with the increase in the number of sick people being handled in hospitals, the necessarily expensive hospital construction, the increased cost of domestic help plus its lack of availability, the displacement of personnel in this country brought about largely by the tendency of industry to shift persons from one area to another, and with the fact that in many homes both the husband and wife are working no one is available to care for the chronically ill at home. It is equally true that the costly acute general hospital bed is not necessary for their care, and we are happy to note that the people of our country are beginning to accept their responsibility of providing institutions for the care of the chronically ill, in which people may be sick without such terrific financial burdens.

Criticism of the medical care program in this country has become rather fashionable and to a certain degree has been healthy. It ceases to be healthy when it goes beyond practical reality to the point of destructiveness. Perhaps some of the criticisms should be reviewed to see how they check up against our inventory. Some of the more common are:

1. There is an inadequate number of physicians.
2. Distribution of physicians is poor.
3. Hospital facilities are inadequate.
4. Fees are too high, including drugs and hospital bills.
5. The indigent care program is inadequate.
6. The doctor is not interested in us as persons, but is interested primarily in his fees.
7. Office personnel are abrupt and cold.
8. The family doctor is not as dependable as he once was.
9. Lack of civic awareness on the part of the medical men.
10. Appointments in the office are not kept anything like religiously.
11. The inability to get a doctor at night and one to come to the home.

These are mentioned only to show an awareness and assure the people we are interested and on the credit side of our inventory we have and are continuing to press for their solution. In the discussion of these, we can say that the University of Louisville is taking more students, and a program is being considered in Kentuc-

ky to have an additional medical school. Doctors in Kentucky are leaders in both movements and this would indicate most strongly that we are not concerned with keeping the number of medical men down.

The problem of distribution has been very difficult to manage as it is relatively impossible to tell any man in the United States where he must or must not live. The rural scholarship fund that you are already familiar with is playing an important role and has done a creditable job with the funds available in getting medical men into more rural communities.

One has only to take a look at the tremendous construction program to note that hospital facilities are becoming more and more adequate all the time. However, the care of the chronically ill should be more greatly involved in this program. We are building in proportion far too many costly acute general hospital beds at the expense of lower cost chronically ill beds. Fees are always a touchy subject to discuss, since our system is based on a man charging according to what he thinks his service is worth. This system is excellent, but it is our considered opinion that some system whereby we can give our insurance companies a fairly good idea of our over-all charges in order that they may actuarially provide a better coverage in the way of voluntary assurance is worth considering in our State.

Let me here reiterate in regard to indigent care, that we are devotedly committed to a program of care which includes immunization and all other care. We as a group will see that they are cared for as we always have.

A more careful selection of applicants to medical school probably is the answer to some of our problems along with the training of students, and we have had splendid cooperation from our medical teachers in Kentucky; in fact, this year our Association spent an entire day with the senior class, teaching them some of the solutions to problems they will naturally encounter as they go into practice. This was done by doctors throughout Kentucky who are engaged in the care of sick people.

As to the criticism of office personnel being abrupt and cold, the Kentucky State Medical Association through its Education Campaign Committee conducted courses throughout the state, teaching personal relations of office personnel to the public, and this program has met with a great deal of success.

In regard to the family physician not being as dependable as he once was, we do not believe this to be true. We still believe that although there is some overspecialization, the family doctor must be the man who directs the health needs of our people, that he must be consulted, and be permitted to direct their health needs. It is not healthy to use the family doctor as an emergency, charity, and night-time doctor, when the patient refers himself to specialists in the daytime. The family doctor has not changed his thinking anymore than the general trend of change in other fields of endeavor throughout this country.

In regard to the criticism that there is a lack of civic awareness on the part of medical men, we believe that this criticism to a certain degree recently has been just, and the chief defense on this score is the fact that so many people have been using the doctor who really do not require his service. This happens when the income of the nation goes up. This keeps him busy beyond any reasonable number of hours. There is a difference between medical care and medical attention, and our public should be educated more in this respect.

As far as keeping appointments more religiously, we believe that our doctors are making an effort to do a better job. However, at the same time, it must be remembered that illness does not run on schedule. If we were able to control the time for illness, we would be able to control illness and wipe out disease. The inability to get a doctor at night or one to come to the house is a rather complex subject and one that we will not have time to go into completely in this short time. This is a subject for an entire morning. However, if we could teach all our people to contact and arrange ahead of time to have a personal physician, a lot of this feeling could be avoided. People wait until they are ill and then frantically go through the telephone book trying to find a physician. We sympathize most deeply with these people and have set up emergency call-systems throughout the nation with the idea of having someone to care for those who do not plan ahead for themselves.

We should like to talk on and on about these various problems, but if we can continue to see that our profession is composed of men of character, integrity, humility, and understanding of human

(Continued on page 1106)

The Jerman M. Baker Memorial Meeting of the Kentucky State Medical Association

Columbia Auditorium, Louisville, Kentucky, September 26, 28, 1955

Digest of Proceedings of the Regular Sessions of the

HOUSE OF DELEGATES

Charles A. Vance, M. D., Lexington, Speaker of the House, Presiding

First Session

The first session of the House of Delegates of the Kentucky State Medical Association was called to order by the Speaker, Charles A. Vance, M. D., Monday, September 26, 1955, at 7:25 p. m., at the Columbia Auditorium in Louisville. L. E. Hurt, M. D., Chairman of the Reference Committee on Credentials, reported that a quorum was present. A motion was made that the minutes of the 1955 meeting be accepted as published in the Journal of KSMA. The motion was seconded and carried.

At this time, Bruce Underwood, M. D., Secretary and General Manager, read the names of all Kentucky physicians who had died since the 1954 meeting.

Following are the names of the physicians:

Baker, J. T., Hickman, Nov. 1, 1954
Baker, John Elliott, Hopkinsville, Dec. 9, 1954
Ballou, P. V., Rowena, June 5, 1955
Barrett, W. L., Whitesville, Sept. 9, 1954
Bonner, James T., Mt. Sterling, Jan. 3, 1955
Brown, Berton M., Hazard, July 11, 1955
Caldwell, A. G., Sinai, April 13, 1955
Casebolt, Solomon B., Pikeville, Aug. 3, 1955
Cole, Ernest, Winchester, Sept. 26, 1954
Cook, MacDonald, Louisville, Dec. 27, 1954
Davis, John T., Louisville, June 14, 1955
Ellars, L. Ray, Louisville, Sept. 22, 1954
Ferguson, John R., Providence, April, 4, 1955
French, Richard V., Louisville, Aug. 23, 1955
Frickman, Oscar A., Newport, June 27, 1955
Giannini, Pearl E., Louisville, Dec. 24, 1954
Gray, Thomas E., Waverly, Feb. 8, 1955
Griggs, S. O., Ft. Thomas, April 1, 1955
Gunterman, Peter, Louisville, Nov. 22, 1954
Hahs, J. F., LaCenter, Oct. 20, 1954
Henry, M. J., Louisville, June 3, 1955
Hobbs, William H., Blue Diamond, Sept. 27, 1954
Hoge, M. E., Jackson, Sept. 8, 1955
Hollinshead, T. H., Louisville, May 29, 1955
Kinchloe, Allen L., Owensboro, Oct. 19, 1954
Knox, Melvin L., Stanton, Jan. 9, 1955
Lapsley, F. L., Shelbyville, Dec. 1, 1954
McGinnis, John S., Lexington, Aug. 16, 1955
McLeish, George M., Louisville, Feb. 18, 1955
Maggard, E. H., Ashland, March 19, 1955
Marks, Samuel B., Lexington, March 12, 1955
Martin, William W., Sturgis, Aug. 29, 1955
Mercer, Nathaniel A., Columbia, March 29, 1955
Moore, W. D., Cynthiana, April 25, 1955
Morgan, E. C., Russellville, Jan. 7, 1955
Myers, Ernest E., Lexington, Nov. 2, 1954
Nevitt, Phillips H., Louisville, Oct. 28, 1954
Overby, Bob C., Paducah, Jan. 14, 1955
Phelps, Marcus, Leitchfield, July 24, 1955
Pollock, M. E., Washington, Nov. 18, 1954
Price, Carroll P., Harrodsburg, Dec. 13, 1954
Rose, James M., Olive Hill, July 5, 1955
Smith, L. Lyne, Louisville, June 3, 1955
Smith, Lucius E., Louisville, Aug. 30, 1955
Smith, William H., Danville, Feb. 15, 1955
Sparrow, William D., Burgin, Feb. 17, 1955
Stark, Charles V., Harlan, June 1, 1955
Stephens, Oscar T., Prestonsburg, Jan. 2, 1955
Stevenson, Chaplain M., Lexington, Feb. 14, 1955
Todd, L. N., Berry, July 28, 1955
Turner, Edmond, Cave City, Sept. 17, 1955
Urton, F. W., Louisville, Dec. 10, 1954
Walker, W. H., Robards, Feb. 9, 1955
Walter, W. L., Winchester, Dec. 24, 1954
Weidner, Carl, Jr., Louisville, March 15, 1955
Williams, L. V., Nicholasville, May 24, 1955
Wilson, B. Ralph, Sharpsburg, May 11, 1955
Woodard, Robert L., Louisville, June 5, 1955

A moment of silent prayer was observed in their honor.

The Speaker read the list of his appointments for the Reference Committees, and the alternate appointments. Motion was made and seconded that the appointments for the Reference Committees be approved by the House of Delegates. Motion carried.

Reference Committee appointments are as follows:

Reference Committee No. 1—Reports of Officers and Councilors

E. M. Howard, M.D., Harlan, Chairman
Rankin C. Blount, M. D., Lexington, Vice-Chairman.
Carlos Fish, M. D., Louisville
D. F. Long, M. D., Elizabethtown
Wendell V. Lyon, M. D., Ashland

Reference Committee No. 2—Reports on Medical Care, Medical Education, Hospitals and related subjects

W. Vinson Pierce, M. D , Covington, Chairman
Richard G. Elliott, M. D., Lexington, Vice-Chairman
George Archer, M. D., Prestonsburg
Chris Jackson, M. D., Danville
John D. Handley, M. D., Hodgenville

Reference Committee No. 3—Reports on Legislation and Public Relations

Richard J. Rust, M. D., Newport, Chairman
Charles H. Maguire, M. D., Louisville, Vice-Chairman
Carl Fortune, M. D., Lexington
Donald L. Graves, M. D., Frenchburg
Ralph D. Lynn, M. D., Elkton

Reference Committee No. 4—Reports on Miscellaneous Business
T. O. Meredith, M. D., Harrodsburg, Chairman
Price Sewell, Jr., M. D. Jackson, Vice-Chairman
Everett H. Baker, M. D., Louisville
W. E. Becknell, M. D., Manchester
Melvin C. Bernhard, M. D., Louisville

Reference Committee No. 5—Reports on Miscellaneous Business
Roy H. Moore, Jr., M. D., Louisville, Chairman
Frank Duncan, M. D., Monticello, Vice-Chairman
Glenn W. Bryant, M. D., Louisville
A. D. Butterworth, M. D., Murray
Vernon Kash, M. D., Winchester

Credentials Committee No. 6
L. E. Hurt, M. D., Lexington, Chairman
J. M. Bush, M. D., Mt. Sterling
D. G. Miller, M. D., Morgantown

Alternate Committee Members
Herbert L. Clay, Jr., M. D., Louisville
Robert S. Dyer, M. D., Louisville
H. B. Murray, M. D., West Liberty
Perry Overby, M. D., Mt. Olivet
Carl Pigman, M. D., Whitesburg
B. F. Reynolds, M. D., Carlisle
Paul J. Sides, M. D., Lancaster
Jesse W. Smith, M. D., Paris
H. G. Wells, M. D., Georgetown

The Speaker recognized the following representatives of the Allied Medical Groups, and asked that each be given the opportunity to speak to the House: Kentucky State Dental Association, A. P. Williams, D.D.S., Louisville, first vice-president, representing J. A. Atkinson, D.D.S., of Louisville, President; Kentucky Hospital Association, Mr. John Buschemeyer, Louisville, President; Kentucky State Association of Registered Nurses, Miss Joy McCuddy, R.N., Lexington, President; Kentucky Pharmaceutical Association, Mr. Gayle Bush, member of the Kentucky Board of Pharmacy, Louisville, representing Mr. Fred Lewis, Jr., Harlan, President.

The Speaker then asked that the following living KSMA past-presidents stand and be recognized by the House:
D. M. Griffin, M.D., Owensboro (absent)
C. C. Howard, M.D., Glasgow
J. B. Lukins, M.D., Louisville
J. D. Northcutt, M.D., Covington (absent)
John W. Scott, M.D., Lexington
E. M. Howard, M.D., Harlan
Oscar O. Miller, M.D., Louisville
J. Watts Stovall, M.D., Grayson
E. W. Jackson, M.D., Paducah
Guy Aud, M.D., Louisville
Charles A. Vance, M.D., Lexington
Hugh L. Houston, M.D., Murray
Sam A. Overstreet, M.D., Louisville
Clark Bailey, M.D., Harlan
Guthrie Y. Graves, M.D., Bowling Green
J. Duffy Hancock, M.D., Louisville

The following reports of officers were presented at this time and referred by the Speaker to the Reference Committee indicated below:

Report of the President—Reference Committee No. 1

Report of the President-elect—Reference Committee No. 1

Report of the Speaker—Reference Committee No. 1

Report and Recommendations of the Council—Reference Committee No. 1

In the absence of the members of the Committee to Select Award Recipients, the Speaker read the nominations of the Committee.

The Committee nominated Joshua B. Lukins, M.D., of Louisville for the Distinguished Service Award and Arcy O. Miller, M.D., of Scottsville for the Outstanding General Practitioner Award. It was moved that the nominations of the Committee be approved by the House. The motion was seconded and carried.

At this time reports of Officers and Committees were received and referred to Reference Committees as follows:

Report of the Secretary and General Manager—Reference Committee No. 1
Report of the Editor—Reference Committee No. 1
Report of the Treasurer—Reference Committee No. 1
Report of the Delegation to the A.M.A.— Reference Committee No. 1
Committee on Arrangements—Reference Committee No. 1
Committee on Scientific Assembly—Reference Committee No. 1
Public Relations Committee—Reference Committee No. 3
Committee on Medical Service—Reference Committee No. 2
Committee to Study the Constitution and By-Laws—Reference Committee No. 4
Medico-Legal Committee—Reference Committee No. 2
Kentucky Committee for Contributions to American Medical Education Foundation—Reference Committee No. 2
Committee on Cerebral Palsy—Reference Committee No. 2
Committee on Corporate Practice of Medicine—Reference Committee No. 3
Diabetes Committee—Reference Committee No. 2
Dietetic Committee—Reference Committee No. 4
Advisory Committee to the Editor—Reference Committee No. 5
Education Campaign Committee—Reference Committee No. 3
Committee on Emergency Medical Service—Reference Committee No. 4
Committee on Geriatrics—Reference Committee No. 5
Committee on Hospitals—Reference Committee No. 2

Insurance Committee—Reference Committee No. 5
Kentucky State Advisory Committee to Selective Service—Reference Committee No. 4
KSMA Dental Committee—Reference Committee No. 2
KSMA Pharmacy Committee—Reference Committee No. 5
KSMA Physicians Placement Committee—Reference Committee No. 3
Legislative Committee—Reference Committee No. 3
McDowell Home Committee—Reference Committee No. 4
Committee on Medical Education—Reference Committee No. 2
Committee to Study Medical Examiner System—Reference Committee No. 5
Medical School Advisory Committee—Reference Committee No. 2
Committee on Nurse Training—Reference Committee No. 2
Professional Relations Committee—Reference Committee No. 4
Committee on Rural Health—Reference Committee No. 4
Committee on School Health—Reference Committee No. 2
Veterans Committee—Reference Committee No. 5
World Medical Association Committee—Reference Committee No. 5
Advisory Committee on Blood Banks—Reference Committee No. 2
Advisory Committee on Cancer—Reference Committee No. 4
Advisory Committee on Crippled Children—no report
Advisory Committee on General Practice—Reference Committee No. 2
Advisory Committee on Industrial Medicine and Surgery—Reference Committee No. 5
Advisory Committee on Mental Hygiene and Mental Institutions—Reference Committee No. 4
Advisory Committee on Obstetrics—Reference Committee No. 2
Advisory Committee on Pediatrics—Reference Committee No. 2
Advisory Committee on Physical Therapy—Reference Committee No. 5
Advisory Committee on Public Health—Reference Committee No. 4
Advisory Committee on Tuberculosis—Reference Committee No. 5
Advisory Committee to Blue Cross— Reference Committee No. 4
Advisory Committee to United Mine Workers Welfare and Retirement Fund—Reference Committee No. 3
Advisory Committee to Woman's Auxiliary—Reference Committee No. 5
Committee on Scientific Exhibits—Reference Committee No. 4
Committee on Technical Exhibits—Reference Committee No. 5
Report of Woman's Auxiliary—Reference Committee No. 3
Report of the Board of Directors of the Kentucky Physicians Mutual, Inc.—Reference Committee No. 4
Report on Rural Kentucky Medical Scholarship Fund—Reference Committee No. 5
Report on Medical Research Commission—Reference Committee No. 2
Conference of Presidents and other Officers of State Medical Associations—Reference Committee No. 1
Report on the Advisory Council to the University of Louisville Medical School Student AMA Chapter—Reference Committee No. 2

The following new business was presented and referred by the Speaker to the indicated Reference Committee:

Resolution of the Taylor County Medical Society concerning definitions and policy relating to practices of medicine—Reference Committee No. 4

Resolution of the Advisory Committee on Mental Hgyiene and Mental Institutions of the Kentucky State Medical Association concerning the importance of administrative continuity to effective progress in state mental hospitals—Reference Committee No. 5

Resolution of the Warren County Medical Society concerning polio vaccine—Reference Committee No. 4

Resolution of the Warren County Medical Society concerning the selection of a medical car emblem—Reference Committee No. 5

Resolution of the Campbell-Kenton County Medical Society concerning the formation of two nominating committees in KSMA—Reference Committee No. 4

Resolution of the Henry County Medical Society concerning the infringement of the Public Health Department on private medical enterprise—Reference Committee No. 4

Resolution of the Boyd County Medical Society concerning medical advertising—Reference Committee No. 5

Resolution of the Campbell-Kenton Medical Society concerning recommending increasing lunacy fee examinations—Reference Committee No. 5

Resolution of the Campbell-Kenton Medical Society concerning distribution of Salk polio vaccine—Reference Committee No. 4

Resolution of the Campbell-Kenton Medical Society concerning the Joint Commission on Accreditation of Hospitals—Reference Committee No. 5

Resolution of Clay County Medical Society concerning proposed study of present Councilor Districts with view to providing a more equitable allocation—Reference Committee No. 5

Resolution of Jefferson County Medical Society concerning opposition to the policy of Joint Commission on Hospital Accreditation in limiting number of courtesy staff memberships in private general hospitals—Reference Committee No. 5

Resolution of Jefferson County Medical Society concerning discrimination against certain groups of doctors of medicine by excluding them from membership on hospital staffs—Reference Committee No. 5

Resolution of Jefferson County Medical Society concerning the distribution and purchase of Salk polio vaccine—Reference Committee No. 4

Resolution of Jefferson County Medical Society concerning the present relationship between the Kentucky State Board of Health and the KSMA—Reference Committee No. 5

Resolution of Jefferson County Medical Society concerning the editor of the Journal of the KSMA—Reference Committee No. 5

At this point, the Speaker presented information on the meeting places of the councilor district nominating committees.

The Nominating Committee reported it had placed in nomination the names of Richard Slucher, M.D., for President-elect, Everett H. Baker, M.D., for central Vice-president; Nathaniel L. Bosworth, M.D., for eastern Vice-president; Howell Davis, M.D., for Western Vice-president; Vinson Pierce, M.D., for AMA Delegate; David Cox, M.D., for alternate AMA Delegate. The Speaker pointed out that the House would elect officers at the second session.

There being no further new business, a motion was made and seconded that the meeting adjourn at 10:15 P. M. Motion carried.

Second Session

The second session of the House of Delegates of the Kentucky State Medical Association was called to order by the Speaker, Charles A. Vance, M.D., Wednesday, September 28, 1955, at 7:15 P. M., in the Columbia Auditorium, Louisville. L. E. Hurt, M.D., chairman of the Reference Committee on Credentials, reported that a quorum was present.

It was moved that the House of Delegates go into executive session for the meeting. The motion was seconded, and carried. The Speaker pointed out that most executive sessions are limited to voting members of the House of Delegates, but in the KSMA, executive sessions are open in addition to all members of the Association. However, the Speaker stated that the privilege of speaking would be limited to the members of the House of Delegates unless the unanimous consent of the House was obtained.

Branham B. Baughman, M.D., Chairman of the Council, presented the final report of the Council, as follows:

This is a supplemental report of the September 28 meeting of the Council of actions so far not reported to the House of Delegates.

The Council recommends to the House of Delegates that a telegram be sent to President Eisenhower expressing the sympathy of the Kentucky State Medical Association and our hope and wishes for a speedy recovery.

Mr. Speaker, I move the adoption of this section of the report. The motion was seconded and carried.

The Council passed the following Resolution at the September 28 meeting:

"WHEREAS, the 1955 Annual Meeting has been a substantial success, and

"WHEREAS, many individuals, organizations, and agencies, including Technical Exhibitors, newspapers, radio and television stations, state and national scientific essayists, hotels, and the Columbia Auditorium, have contributed to its success, and

"WHEREAS, the University of Louisville has cooperated to the fullest degree in the development and presentation of the color telecasts that have been so profitable, and

"WHEREAS, the Smith, Kline and French Laboratories brought their color television broadcasting equipment here and sponsored eight hours of most valuable broadcasts to our membership.

"NOW THEREFORE, be is resolved that the House of Delegates go on record as expressing its deep appreciation to all who have had a part in its development and implementation."

Mr. Speaker, I move the adoption of this section of the report. The motion was seconded and the motion carried.

The Council passed the following resolution:

"WHEREAS, There is an ever increasing amount of legislation, which directly or indirectly affects the medical profession, introduced into Congress and the State Legislature, and

"WHEREAS, The individual physician, the local county society and the state medical association, are frequently not aware of, or are not appraised of the content and meaning of the legislation, therefore

"BE IT RESOLVED, that the KSMA request the U. S. Senators and Representatives from Kentucky to send copies of such proposed legislation to the KSMA before any action is taken, and

"AND BE IT FURTHER RESOLVED, that the Legislature of the Commonwealth of Kentucky likewise send copies of such legislation to the KSMA and

"BE IT FURTHER RESOLVED, that the KSMA promptly disseminate such material to the various component societies of the KSMA in the most reasonable and suitable manner."

Mr. Speaker, I move the adoption of this section of the report. Motion was seconded and carried.

The Council discussed action taken by the House at its 1954 meeting concerning

the appointment of an Awards Committee to select the recipients of the Distinguished Service Award and the Outstanding General Practitioner Award, which was as follows:

"The Council recommends that the House of Delegates direct the Speaker of the House to name a committee of five (not necessarily members of the House of Delegates) to serve throughout the year for the purpose of selecting the recipients of the Distinguished Service Award and the Outstanding General Practitioner Award. This appointment shall be made at the final meeting of the House of Delegates and report at the first meeting of the House of Delegates one year later."

The Council recommends to the House of Delegates that this same procedure be followed next year, with the additional provision that the Committee submit their recommendations on the opening night of the House of Delegates and on the closing night additional candidates may be nominated from the floor and the House of Delegates will then vote on the nominations for these two awards.

Mr. Speaker, I move the adoption of this section of the report. The motion was seconded and carried.

Mr. Speaker, I move the adoption of this report as a whole. The motion was seconded and carried.

The Speaker then asked the following out-of-state presidents and secretaries to stand and be recognized by the House: F. Garm Norbury, M.D., president, Illinois State Medical Society; Walter Portteus, M.D., president, Indiana State Medical Association; Harold M. Camp, M.D., secretary, Illinois State Medical Society, and Mr. James Waggener, Executive Secretary, Indiana State Medical Association.

At this time, the reports of the Reference Committees were presented:

REFERENCE COMMITTEE NO. 1
E. M. Howard, M. D., Chairman
Reports of Officers and Councilors

Report of the President

The President told of his activities during the past year, made observations on various conditions he found during his travel throughout the state and to neighboring state medical associations, and made the following recommendations:

1. Councilors consider favorably a district meeting in their next year plans.

2. Permissive legislation be passed to allow official enlargement of component units without loss of franchise.

3. The Corporate Practice Committee seek a joint meeting with representatives of the Bar Association to discuss mutual problems.

4. The House of Delegates request the legal enforcing agency of the Medical Practice Act to seek and secure an opinion from the Attorney General as to whether Hospitals charging for services of radiologists, pathologists and other licensed practitioners of medicine are acting within the law.

5. This Association reaffirm its previous position in relation to United Mine Workers Welfare Organization Program and actively support its component units in their efforts to solve this and related problems.

6. This House of Delegates direct the Council to formulate a basic policy referrable to lay-sponsored health groups and movements.

7. This body instruct the Medical Service Committee to place our major unsolved problems in positions of relative importance and report their findings to the Council. The Council is then directed to bring to this House, in 1956, positive recommendations as to how these problems are to be solved and a goal to be reached in the next five or ten years.

8. A special committee of this House be appointed to study our committee, and any other organizational structure problem it may consider proper, and report at the 1956 annual session.

9. Chapter 8, Section 2 of the KSMA Bylaws providing for a Committee on Arrangements be deleted and that responsibility of this committee be taken over by the Committee on Scientific Assembly.

10. We continue to sponsor and support the County Society Officers' Conference, Woman's Auxiliary Program, Senior Day program and that all possible steps be taken to continue good relations and cooperate with allied health groups.

The Committee commends President Clyde C. Sparks, M.D., for a competent and sincere leadership of this Association. The many recommendations were considered and discussed and by vote the report was unanimously approved.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the President be adopted.

Report of the President-Elect

The President-elect reviewed the meetings he had attended and commented briefly on each. He paid tribute to his predecessor and expressed a desire that, during the next associational year, he may serve the Association as efficiently and tirelessly as the retiring president.

The report of the President-elect was discussed and unanimously approved.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the President-elect be adopted.

Report of the Speaker

The Speaker reported that he has made the Nominating Committee and Reference Committee appointments as provided by the Bylaws and expressed the hope that the business transacted at the 1955 sessions of the House will be conducted in a fair manner to all concerned.

This report was read and unanimously approved as read.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried.

Report of the Secretary and General Manager

The Secretary and General Manager mentioned in his report some of the activities in which the Headquarters Office has been engaged during the past year. Among those included were: promotion of the County Society Officers' Conference, Annual Rural Health Conference and Senior Day, the monthly edition of the Secretary's Letter and News Capsules, and preparation for the Annual Meeting, including the processing and assembling of reports of the 50 odd committees of the Association.

He expressed the appreciation of the Headquarters Office to the members of the Council and Executive Committee and to the Association's legal advisor, Mr. Vincent Goodlet, for their cooperation.

This report was approved by the Committee as read.

Mr. Speaker, I move the adoption of this section of the report.

The motion was seconded and carried that the report of the Secretary and General Manager be accepted.

Report of the Editor

The Editor pointed to the growth of the Journal during the past associational year. To illustrate, he mentioned the addition of two new departments, making a total of 11 regular departments, plus two optional departments.

Also of interest, was the fact that the gross income from advertising has increased almost $3,000 over the last associational year, which indicates the confidence of the advertisers in the Journal.

This report was approved by the Committee as read.

Mr. Speaker, I move the adoption of this section of the report.

The motion was seconded and carried that the report of the Editor be accepted.

Report of the Treasurer

The report of the Treasurer contained the recent audit of the Association's financial situation with statement of financial condition and statement of income and expenses for the fiscal year ending June 30, 1955.

The report of the Treasurer was read and approved by the Committee.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Treasurer be accepted.

Report of Kentucky Delegation to AMA

The AMA Delegates reported on the interim session held at Miami in December and the Annual meeting held at Atlantic City last June. It was mentioned that both sessions were well attended, and that at Miami, Bruce Underwood, M.D., Kentucky delegate, was honored by being made Chairman of the Medical Military Affairs Reference Committee. During the Atlantic City meeting, both delegates were kept busy with Reference Committee assignments, and it was reported that the following principle items were considered by the House of Delegates during the June meeting at Atlantic City: osteopathy, medical ethics, medical practices, intern training, hospital accreditation and polio vaccine.

The Delegates pointed out that Dwight H. Murray, M.D., Napa, California, was unanimously elected as president-elect for the coming year and that Dr. Underwood received serious consideration as vice-speaker of the AMA House of Delegates.

The Committee read this report and wishes to thank the Delegation to the AMA for their very commendable work.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Kentucky Delegation to the AMA be accepted.

Report of Committee on Arrangements

The Committee reported that a meeting was held in January, of 1955 for the purpose of planning for the Annual Meeting. Some of the arrangements made were: scheduling of time for general scientific sessions so that the color television might be used to the best advantage; seating arrangements for the President's Luncheon; fixing the time for the inaugural ceremonies and presentation of awards; and, the appointment of a Golf Committee, which arranged for the KSMA Golf Association tournament.

This report was approved as read.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Committee on Arrangements be accepted.

Report of the Committee on Scientific Assembly

The Committee reported its action in formulating plans for the 1955 meeting.

This report was approved as read.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Committee on Scientific Assembly be accepted.

Conference of Presidents and Other Officers of State Medical Associations

The KSMA Representative reported on the Annual Meeting held at Atlantic City in June. He said it was very well attended and an interesting program was given.

The report was approved as read.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Representative to the Conference of Presidents and other Officers of State Medical Associations be accepted.

Report of the Council

The report of the Council was presented

by Branham B. Baughman, M. D., Chairman.

The 33-page report was a digest of the six Council meetings held prior to the Annual Meeting.

Report of the Council to the 1955 Session of the House of Delegates

FIRST MEETING. The reorganizational meeting of the new Council was held at the Brown Hotel September 23 with Bruce Underwood, M.D., Louisville, Secretary and General Manager of the Association serving as temporary chairman.

Branham B. Baughman, M. D., Frankfort, was elected chairman of the Council and Richard R. Slucher, M.D., Buechel, vice-chairman. Dr. Underwood was chosen as General Manager for the Council.

Dr. Baughman then explained that the By-laws provided for the Executive Committee of the Council composed of the chairman of the Council who automatically serves as chairman of the Executive Committee, the vice-chairman of the Council, the president, the president elect, the secretary and general manager, and two members of the Council who are elected each year by the Council. Walter L. O'Nan, M.D., Henderson, and Edward Mersch, Covington, were elected to complete the Executive Committee roster for the new year. Charles B. Stacy, M.D., Pineville, who was chosen at the 1954 session of the House of Delegates to succeed Edward Wilson, M.D., Pineville, Councilor from the Fifteenth District, was welcomed to the Council. He was the only new member of the Council.

The Council then named the committees as provided by the by-laws. These committees are: Advisory Committee to the Editor; Public Relations Committee; Committee on Medical Service; Education Campaign Committee; Legislative Committee; and Medico-Legal Committee. The personnel of these committees will be found in your House of Delegates Manual.

Following the precedent set at the September 11, 1952 meeting of the Council, no individual report of the Executive Committee will be made to the House of Delegates. Under this precedent positive action of the Committee will be listed in the Report of the Council and, of course, the recommendations of the Committee to the Council will be noted in the actual deliberation of the Council. The Executive Committee held three meetings during the 1954-55 year.

Positive actions taken by the November 4 meeting of the Executive Committee at the Frankfort Country Club were:

1. Gaithel Simpson, M. D., Greenville, chairman of the Committee on Medical Service reported on the progress of this committee's survey of indigent medical care in the state. He said that there was still some information to be received, and that the committee felt it necessary to check much of the material gotten from the thirteen counties in the spot survey.

He pointed out that he and the KSMA field director were going to study indigent care plans of Maryland and Tennessee and that the field director was going to the AMA offices in Chicago to work with the Council on Medical Service in setting up the report. He said it was planned to report briefly to the Allied Council on Medical Service at its January meeting. The Executive Committee thanked Dr. Simpson for his splendid work in getting this information together.

2. Activities of the House of Delegates were reviewed and in instances where the House of Delegates voted that certain issues should be given further study, the Executive Committee authorized the Headquarters Office to refer these matters to the appropriate committees. These included the so-called "pathology resolution," parts of the Advisory Committee on the UMWA Retirement Fund, Advisory Committee on Public Health, McDowell House Committee, a resolution on Blue Cross benefits, and a committee to study medical examiner's system.

3. The Executive Committee authorized the Headquarters Office to send the Insurance Committee approved booklet published by the Better Business Bureau to all KSMA members.

4. Dissatisfaction growing out of nominating procedures for state officers at the 1954 Annual Meeting, as prescribed by the by-laws, was discussed. The Executive Committee voted to ask the Nominating Committee, which was elected at the 1954 Session of the House, to nominate officers to be elected at the 1955 meeting, to meet at the County Society Officers' Conference, April 7, and organize. After the organization of the Nominating Committee, each county society was to be informed that the Nominating Committee had organized and given the names of the committee members, with the explanation that an open session would be held at the first meeting of the House of Delegates on September 26. The purpose of this was to give all interested parties an opportunity to appear before the Nominating Committee. The Committee would then make its report as the final order of business at the first meeting of the House as prescribed by the by-laws.

5. The matter of whether or not the State Board of Health should also be the agent to license physicians was was discussed. The Executive Committee then voted to authorize its chairman to appoint a special committee to study this problem and report back to it.

6. The Executive Committee voted to hold the 1956 Annual Meeting September 18, 19 and 20.

SECOND MEETING. The second meeting of the Council was held in the Headquarters Office in Louisville on December 16.

1. KSMA President, Clyde C. Sparks, M. D., gave a thirteen point report of his activities as president to the Council. The report included plans for the 1955 Annual Meeting in which color television would be employed, the number of speaking engagements he had filled on behalf of the Association, plans for the President's Page, and urged attendance at the County Society Officers Conference in April.

2. Clark Bailey, M. D. Harlan, one of the KSMA delegates to the AMA gave the report of the Kentucky delegation on the Miami meeting of the AMA held November 22 to December 2. Dr. Bailey described the Miami meeting as one of the most successful and one of the busiest he has ever attended. He said some of the top issues of the meeting were Hospital Accreditation, Osteopathy, Malpractice, Doctor Draft Law, and Intern Problems.

He said that Bruce Underwood, M. D., has been made chairman of the Aces and Deuces, an organization of states who are eligible to have only one or two delegates to the AMA.

3. The Headquarters Office report was given by Dr. Underwood. He said that to date 425 secretaries to physicians had taken the Education Campaign Committee's PR Course, that the 27 Kentucky radio stations carrying health education platters were being thanked, that the Headquarters Office had carried out the directions of the last meeting of the Executive Committee.

He told the Council that the Journal of KSMA had established a new book review department and had appointed a medical editorial editor. It was decided, following Dr. Underwood's suggestion, that the Headquarters Office report in the future be mimeographed and passed out to members of the Council.

4. The chairman informed the Council of the accident of L. O. Toomey, M. D., Bowling Green, Councilor for the Sixth District, which occurred the Sunday before. Dr. Toomey's condition was reported as satisfactory.

The Chairman of the KSMA Committee on Blood Banks, Marion F. Beard, M. D., Louisville, discussed the efforts of two out-of-town laymen to organize a commercial blood bank not under the supervision of physicians. Following discussion, the Council voted to go on record opposing the principal of the operation of a blood bank that is not under the control of, or run by, doctors of medicine and that any new banks should be run under the supervision of the county medical society or a committee appointed by the county medical society.

5. Dr. Simpson, chairman of the Committee on Medical Service, discussed in detail the survey on indigent medical care that his committee was completing. The Council voted to authorize Dr. Simpson to give a summary of the results of the survey to the Kentucky Council on Allied Medical Services and also to make this information available to the governor of Kentucky. The chairman of the Council and Dr. Simpson were delegated to take care of the matter. Dr. Simpson promised the Council that he would make a final report on the activities of his committee at the April meeting. Dr. Baughman expressed the appreciation of the Council for the splendid work being done by Dr. Simpson's committee and for his appearance before the Council.

6. Dr. Underwood then presented the recommendation of the Executive Committee to the Council that "KSMA and AMA membership dues be made mandatory." After discussion it was decided to vote on these two matters individually. The Council then voted to instruct the KSMA By-laws Committee to change the by-laws to make it mandatory that any physician joining the local county medical society must also become a member of the state society.

Following additional discussion on the matter of making membership in AMA mandatory for all KSMA members it was moved and seconded that this be done. Following further discussion, however, the Council voted to table the motion.

7. Dr. Underwood then presented the Executive Committee recommendation that the Constitution and By-laws Committee be instructed to draft a proposed change in the by-laws to make vice-presidents voting members of the Council. Following a brief discussion, the By-laws Committee was asked to amend Chapter 7, Section 1, to include the vice-presidents as members of the Council.

8. Executive Committee recommendation to fill vacancies on the State Board of Health for the terms of E. M. Howard, M. D., Harlan, and Fred Moberly, M. D., Lexington which expired December 31 was read by Dr. Sparks. The names of three men for each position as prescribed by law were nominated and the Headquarters Office was authorized to present these to the chief executive of the state. Those nominated to fill the vacancies were as follows: E. M. Howard, M. D., Harlan; Frank Duncan, M. D., Monticello; Dana Snyder, M. D., Hazard to fill the position held by Dr. Howard. Fred Moberly, M. D., Lexington; Donald Graves, M. D., Frenchburg; Bernard Baute, M. D., Lebanon, were nominated to fill the position held by Dr. Moberly.

9. Dr. Sparks then read the recommendation of the Executive Committee to the Council as follows: "The Executive Committee endorses the idea of multiple county medical societies and requests the Council to give its full approval and that it be referred to the Committee on Constitution and By-laws for appropriate action." Following discussion, the Council voted to table the Executive Committee recommendation.

10. The Council then voted to postpone any action on requesting the By-laws Committee to draft changes covering the operating procedure of the Nominating Committee.

11. The Council considered the invitation of the Lexington Chamber of Commerce that the 1957 Annual Meeting be held at Lexington. After discussion, the Council passed a motion made by J. Ferra Van Meter, M. D., Lexington, that the 1957 Annual Meeting be held in Louisville.

12. Dr. Sparks read the Executive Committee recommendation to the Council "that the county societies be urged by the Council to become incorporated." The Council voted to accept the recommendation of the Executive Committee to urge the county societies to become incorporated.

13. Dr. Baughman explained that physicians in areas served by the Frontier Nursing Service of Eastern Kentucky had complained of the activities of some of the nurses employed by the Frontier Nursing Service. He said that the Executive Committee had asked the State Board of Health to conduct an investigation into the matter and that Mr. Raymond F. Dixon, Assistant Secretary of the Board, was now ready to report.

Mr. Dixon stated that he had had a very satisfactory conference with Miss Mary Breckenridge, head of the Frontier Nursing Service, and that many matters pertaining to the grievances had been discussed and that a better understanding had been reached. Mr. Dixon was thanked for his assistance.

Positive actions taken at the March 17 meeting of the Executive Committee in Louisville are given below:

1. In the president's report, Dr. Sparks enumerated the many appointments that he had kept as president, mentioned the broad recog-

nition that the speech given by Wyatt Norvell, M.D., New Castle, chairman of the KSMA Rural Health Committee, had received, which had been presented at the National Rural Health Conference at Milwaukee in February. Dr. Sparks also told of the meeting of the UMWA Committee and plans for the first Senior Day luncheon by the KSMA for the fourth year class of the University of Louisville School of Medicine. He also mentioned a number of appointments which were made for him by the three vice-presidents of the Association.

2. Headquarters Office report was presented in mimeographed form. Dr. Underwood made brief comments on some of the items which included the appointment of J. Duffy Hancock, M.D., Louisville, to serve as advisory chairman to the Social Security Administration in the Department of Health, Education, and Welfare in Washington. It also included progress on preparations made for the Officers Conference and for Senior Day. It was pointed out that the 100 subscriptions to "Today's Health," authorized by the Council to the Bookmobiles in Kentucky had been paid for and that the magazine was now going to the Bookmobiles monthly. Attention was called to the fact that the National Rural Health Conference would meet in Louisville in 1957 as a result of the work of Dr. Norvell, chairman of KSMA Committee on Rural Health.

3. First order of business was presentation of the proposed budget by Delmas Clardy, M.D., Hopkinsville, Chairman of the 1955-56 Budget Committee. Since the Executive Committee recommends the budget to the Council, this item will be covered in the actions of the April 17 meeting of the Council.

4. Dr. Simpson, chairman of the KSMA Committee on Medical Service gave a special report on the survey and following the discussion certain minor editorial changes were made in the report. This matter, too, was referred to the Council.

5. The Executive Committee was informed by Dr. Underwood that the term of Gordon Carr, M.D., Sturgis, on the Hospital Licensure Council would expire June 30. The Committee voted to submit the names of three KSMA members as prescribed by law to Governor Wetherby.

6. Dr. Sparks explained that if a man was in good standing as a member of KSMA at the time he was inducted into military service his dues would be waived and he would be regarded as a member in good standing until the beginning of the first calendar year following his return to active practice. He stated that one county medical society who had a member inducted into the military service had requested that the member be carried as being in good standing even though he had not paid his 1955 dues.

After discussion, the Headquarters Office was authorized to write to the county society that the physician in question would be excused from payment of his 1955 dues at this time if he agrees to pay his state dues at the time he was separated from service following his tour of duty.

7. Dr. Sparks then discussed the Council ruling that if the new man going into practice in Kentucky for the first time after July 1 sought to join the KSMA he would be required to pay only half of the regular annual dues. He read the request of one of the component counties relative to a former member who had given up practice to take a two year residency and who, that county felt, should be allowed to take advantage of the half year rule.

After discussion, the Executive Committee voted that former members of KSMA who returned from hospital training and again entered practice after July 1 be charged only one half of the annual dues.

8. The date of the 1957 Annual Meeting was set for the Executive Committee for September 17, 18 and 19.

9. Dr. Sparks spoke of the difficulties that state medical society officers experienced while attending meetings of the AMA House of Delegates because no material was available from the AMA Headquarters Office. He felt that these officers had a legitimate interest in the action of the House of Delegates and that the reports and resolutions should be provided the state officials. It was decided that Dr. Sparks should write a resolution and present it at the next meeting of the Executive Committee.

10. Dr. Underwood said the State Department of Health felt that there was a need for a weekly health column which would be distributed to all weekly and daily newspapers in Kentucky. It felt that this was a state medical association function but if the medical association did not undertake it, the health department would be glad to do so. After discussion, this matter was referred to the Education Campaign Committee with the request that the recommendation be given a thorough study and that a report be made to the Executive Committee on the findings of that committee.

11. Dr. Undewood briefed the committee on the plans for the distribution of the polio vaccine to the county health departments. He pointed out that the general thought was that each county should handle this matter in what ever way it felt best. The Executive Committee accepted Dr. Underwood's recommendation that each county medical society be contacted and requested to cooperate with local health authorities in administering the polio vaccine.

12. The Committee elected John P. Glenn, M.D., Russellville, to fill the vacancy on the Committee on Medical Service.

13. Dr. Baughman presented to the committee a copy of the Blue Shield poster requesting the opinion of the group as to whether or not the poster would be acceptable for exhibition in doctors' offices, etc. The Executive Committee voted to endorse the proposal.

14. The Executive Committee was acquainted with certain errors that appear in the contract then in existance between KSMA and the Veterans Administration to provide hometown medical care to veterans with service connected disability. The Executive Committee voted to authorize the KSMA Veterans Committee to undertake to have these errors corrected and to review the contract when it expires on June 30, 1955.

15. Dr. Underwood stated that a non-profit organization had applied for the right to lease the Oneida Hospital equipment. He said that the State Department of Health was acting as custodian for certain federally owned hospital equipment in the building and would like the committee's attitude on this matter. The com-

mittee voted to endorse the idea of the Health Department leasing it to a non-profit organization.

THIRD MEETING. The third meeting of the Council was held at the Phoenix Hotel in Lexington following the County Society Officers Conference April 7. Dr. Sparks said his president's report had appeared in the minutes of the March 17 Executive Committee meeting which had recently been mailed.

1. A mimeographed copy of the Headquarters Office report was distributed. The statement highlighted plans for the 1955 immunization week; gave results of the 1954 diabetes detection drive, and plans for the 1955 effort; called attention to a letter from the physician who had complained about the Frontier Nursing Service employees complimenting the Association on their efforts; told of the work of the physicians placement service; and progress of the Journal.

2. Dr. Baughman then introducted the chairman of the Budget Committee, Dr. Clardy, who said that the Budget Committee had had a day long meeting at the home of Dr. Toomey in the Spring. He said the budget drafted at this meeting had been presented to the Executive Committee on March 17 and was unanimously recommended to the Council.

Dr. Clardy said that this year's budget was essentially the same as last and included routine salary increments.

After presenting the budget in detail, Dr. Clardy read the two special recommendations of the committee: (1) that a committee be appointed to study the reinvestment of the Association's bonds which would mature January 1 and (2) that two 3/4 ton air conditioners be installed in the large room occupied by and for the use of the clerical staff at the Headquarters Office. It was also proposed that the Headquarters Office be authorized to have the air conditioners installed so that the staff might enjoy the benefits prior to the beginning of the new budget year on July 1.

After discussion the Council voted to accept the 1955-56 budget together with the recommendation as presented by the budget committee and as approved by the Executive Committee.

3. Dr. Baughman then opened the discussion on handling of the Association's funds and the reinvestment of matured stock. Following discussion, the ensuing motion was adopted "That the Council instruct the president of the Association to appoint a committee to take care of the investment of the Association's money and that the committee be instructed to place the entire amount of the money in government bonds in the way that it sees fit." The motion was seconded and carried.

4. Dr. Simpson was then introduced by Dr. Baughman, and Dr. Simpson presented the final report of the Committee on Medical Service covering the survey of indigent medical care and the recommendations of his committee. The report was read in sections and each section was voted on after it was presented. Included in the recommendations were how the full reports should be publicized and when it should be released. (Each county medical society secretary and each member of the House of Delegates has been provided with a copy of the detailed report of the committee.) Dr. Baughman expressed the appreciation of the Council to Dr. Simpson and his committee for the great amount of time and splendid work they had done in the assembling and presentation of this report.

5. The request of the associate scientific editor, Jack Chumley, M.D., for the purchase of an ediphone which was so greatly needed in his work on the Journal was presented by Dr. Underwood. The Council voted to purchase the requested equipment.

6. Dr. Underwood stated that J. B. Lukins, M.D., Louisville, who for many years had been chairman of the Medico-Legal Committee and made known his intentions to resign at the conclusion of the 1954-55 Associational year. Dr. Underwood said it was Dr. Lukins' recommendation that John D. Gordinier, M.D., Louisville, be appointed co-chairman of the Medico-Legal Committee. The recommendation was accepted by the Council.

7. Dr. Underwood then explained to the Council that the Executive Committee has authorized him to prepare the recommendation for a proposed new Public Health Advisory Committee to be considered by the Council at this meeting. Dr. Underwood stated that his proposed committee would be a committee of the Council and it would consist of one man appointed from each Councilor District for a period of three years with the term staggered so that five men would be appointed each year, the vice-chairman of the Council automatically serving as chairman of the committee. It was suggested that the committee would take two kinds of action: (1) one would be to give endorsement to certain proposals on the operation of the Department of Health and (2) the other, on matters of greater importance, the committee would make recommendations to the Executive Committee. Dr. Underwood said the alternative to not having such a committee would be to continued to crowd the agenda of the Executive Committee of the Council. After discussion it was voted that such matters be handled by the Council.

8. Dr. Underwood then discussed the operation of the new Hill Burton Law, passed by the 1954 Congress, relative to the matter of building diagnostic and treatment centers in Kentucky, and he pointed out some of the problems in this connection. Following a lengthy discussion, the Council decided that since there was a different set of facts and circumstances surrounding each application for Hill Burton Funds to build diagnostic treatment centers that cases be considered individually and that the Council would be glad to consult with the Commissioner of Health on such matters if requested.

Positive actions taken at the June 23 meeting of the Executive Committee of the Council were:

1. President's report. Dr. Sparks reported that since the last meeting of the Council, two months before, he had travelled more than 3000 miles discharging the obligations of his office. He gave a brief summary of the speaking engagements before KSMA and allied and lay groups. Dr. Sparks commented at length on Senior Day, the effective way in which the special committee planned it, the unfolding, and the results. He regarded it, he said, as one of the most effective services the Association had rendered. Dr. Sparks discussed the meetings he had attended in connection with the

APPROVED KSMA BUDGET FOR FISCAL YEAR
July 1, 1955 - June 30, 1956
ESTIMATED ASSETS AS OF JULY 1, 1955

GENERAL OPERATING AND JOURNAL ACCOUNTS

ASSETS:

Current Assets:

CASH IN BANKS:			
Checking Account	$ 2,500.00		
Savings Accounts	40,000.00		
Total Cash in Banks		$ 42,500.00	
INVESTMENTS—AT COST:			
U. S. Government Bonds	$31,481.00		
Louisville Title Mortgage Co. Com. Stock	755.52		
Total Investments		$32,236.52	
ACCOUNTS RECEIVABLE—ADVERTISING		1,500.00	
ADVANCE FOR EMPLOYEES' ANNUITY PREMIUMS—Group Plan		1,200.00	
Total Estimated Current Assets			$ 77,436.52
Fixed Assets:			
Library—Estimated Value	$ 520.00		
Office Equipment—Depreciated Value	3,812.43		
Total Fixed Assets			4,332.43
Total Estimated Assets—General Operating and Journal Accounts			$ 81,768.95

McDOWELL FUND ACCOUNT

ASSETS:

McDowell House—At Appraised Value	$25,000.00	
McDowell Home—Furnishings—Appraised Value Estimated	22,666.00	
Total Assets—McDowell Fund Account		$ 47,666.00
GRAND TOTAL OF ALL ESTIMATED ASSETS AS OF JULY 1, 1955		$129,434.95

ESTIMATED INCOME AND EXPENSES, JULY 1, 1955 - JUNE 30, 1956

	Estimated Income	Estimated Expenses
GENERAL OPERATING ACCOUNT		
Income:	$ 69,525.00	
Expenses:		
Current Fund Account		$54,699.68
Officers, Councilors, and Miscellaneous Committees Expense Account		1,000.00
Medico-Legal Committee Expense Account		770.00
Promotional Expense Account		3,833.32
Diabetic Detection Program Account		100.00
Postgraduate Education Program Account		1,000.00
Annual County Society Officers' Conference Account		500.00
Rural Health Committee Account		300.00
Woman's Auxiliary Account		500.00
Physicians' Placement Committee Expense Account		200.00
Total Estimated Income and Expenses—General Operating Account	$ 69,525.00	$62,903.00
JOURNAL ACCOUNT	18,100.00	21,795.00
ANNUAL MEETING ACCOUNT	10,360.00	10,360.00
McDOWELL FUND ACCOUNT	2,800.00	2,800.00
TOTAL BUDGETED INCOME	$100,785.00	
TOTAL BUDGETED EXPENSES	97,858.00	
GAIN	$ 2,927.00	

projection of the indigent medical care survey and stated his appreciation of the fine cooperation that the vice presidents had shown in carrying out the duties of the presidential office.

Dr. Sparks observed that he had noted a growing interest among the young physicians in organizational matters during his travels and urged that this be encouraged.

2. Dr. Underwood presented the written report of the Headquarters Office which included statement of membership, meetings at which the Headquarters Office had been represented, the terrific amount of work that had gone into the processing of more than 1350 copies of the indigent medical care report, comments on the coverage that the announcement of the survey received. The report also stated that the AMA Public Relations Manual was being distributed, and that more counties were signing up for the physicians' secretaries' courses, and that the Headquarters Office had assisted in the development and promotion of the first annual Senior Day.

In the supplemental report, Dr. Underwood reviewed the action taken by the House of Delegates of the AMA at Atlantic City early in June. He explained he discussed the voluminous reports to the Board of Trustees of the AMA by its special committee on medical practices and recommended that this report be sent to the officers and councilors of this association. The Headquarters Office has processed and mailed this report to each officer and councilor. Additional copies may be had on request.

Dr. Underwood read the following letter which had been directed to the 1955 KSMA Nominating Committee.

"Unless there is strong objection to the contrary, it is my request that I not be renominated for the position of delegate to the AMA. This is my personal feeling in the matter and I believe it is in the interest of the Association.

"I am grateful for the privilege and the experience of serving in the past, but feel it would be better for someone else to be elected to the position this year."

Dr. Underwood pointed to the new AMA practice of introducing past presidents of the AMA to the House of Delegates and then inviting the presidents of Auxiliary groups to appear before the first meeting of the House of Delegates and bring greetings from their organization. He recommended that the KSMA House of Delegates follow the same practice. Following discussion, the committee voted to ask the speaker of the KSMA House of Delegates, the president, the chairman of the Council, and the secretary and general manager select presidents from certain allied groups at the coming meeting and ask them to bring greetings from their organization, at the first meeting of our House of Delegates September 26.

3. J. W. Hancock, M. D., Louisville, chairman of the Committee to Study new Licensing Board Proposal, gave a detailed report of the work of his committee. Following discussion, the Executive Committee voted to express its appreciation to Dr. Hancock and his committee for its work and to continue to study the subject.

4. Wyatt Norvell, M. D., Newcastle, chairman of the Rural Health Committee, made three recommendations to the committee. Two of them were passed to the Council and will be reported under actions of the August 25 meeting. The third had to do with a request that funds be appropriated to record and process the proceedings of the next Rural Health Council. The committee voted to hold this matter in abeyance until more concrete information could be presented on the cost of this undertaking.

5. The Executive Committee voted to leave the setting of the date of the 1956 officers conference to the president-elect and the Headquarters Office. The date set is the first Thursday in April.

6. Rural Medical Scholarship Beneficiaries Service. Following a proposal presented by Dr. Underwood the committee voted to mail the Journal of KSMA, free of charge, to beneficiaries of the Rural Kentucky Medical Scholarship Fund who are now on active duty in the armed forces.

7. Recommendations of Committee on Corporate Practice of Medicine. The committee was briefed by Dr. Baughman on the request made in Section 4 of the UMWA Committee to the 1954 session of the House of Delegates. That report requested that the Association study the matter of corporate practice of medicine and come up with a definition. Dr. Baughman then read the statement of the Committee on Corporate Practice of Medicine on this matter which indicated that the committee was continuing to study the whole problem. The Executive Committee then expressed the hope that the Committee on Corporate Practice would keep working on the problem. The Committee on Corporate Practice of Medicine's pathology resolution was passed to the Council and will be in the report of the August 25 meeting.

In the Corporate Practice of Medicine Committee report, interest was expressed in the psychiatric ward of a Louisville Hospital and permission was requested that the committee be allowed to obtain more information on this matter. Permission was granted by the Executive Committee to do so.

8. Reference Committee procedure. Dr. Sparks discussed the dissatisfaction that many of the delegates and members felt with the lack of time there was to testify before reference committees and the great volume of work that the reference committee was called on to do during the short period that was scheduled for it to have hearings. Dr. Sparks also suggested that the speaker of the House be authorized to make tentative assignments of all committee reports in advance of the meeting of the House of Delegates so that members of the reference committees might have an opportunity to read over these reports before coming to the meeting of the House of Delegates. Following discussion, the Executive Committee authorized the speaker of the House of Delegates, the secretary and general manager, and the executive secretary to try to work out a suggestion to alleviate these difficulties.

9. Blue Cross Resolution. Dr. Baughman explained that at the 1954 session of the House of Delegates a resolution on Blue Cross Benefits had been submitted and that action had been deferred pending further study. At the meeting of the Executive Committee last fall the resolution was referred to the Committee on Medical Service. The Committee on Medical Service was now reporting. He said the Commit-

tee on Medical Service recommended that the resolution be passed to the National Blue Cross Commission without recommendation. The proposal of the Committee on Medical Service was endorsed by the Executive Committee.

10. The Executive Committee approved a pension trust agreement for KSMA employees which would provide that employees would not have to pay income tax on that part of the pension premium paid by the Association.

FOURTH MEETING. The Council held its fourth meeting of the year August 25 in the office of the Secretary and General Manager in Louisville.

1. The chairman explained that because of commitments entered into before the date of this meeting had been set, the president was not able to attend. He asked the Executive Secretary to read correspondence from the Jefferson County Medical Society which concerned the resolution passed by the Society prior to Congressional action on the Salk vaccine legislation that was pending at that time.

The Council accepted the letter as the report of the Headquarters Office.

2. Highlights of the Headquarters Office report which had been mimeographed and circulated among the members included the statement that the staff was on schedule in preparing the 63 reports of the Officers' Committees, in the amount of 250 copies of each report, to the 1955 Session of the House of Delegates; that the date of the 1955-56 Officers' Conference had been set; that the interest in the scientific exhibits was growing; and that seven had to be rejected; and that Technical Exhibit Hall would have the largest number of exhibits on record, this year.

3. The report also stated that the field secretary is being kept busy by the Legislative Committee; that the Association will have a booth at the Kentucky State Fair; that the Committee to select the presidents of allied groups to bring greetings from the various allied groups to the House of Delegates was functioning and would make its determination that day. It was decided to invite the presidents of the four other members of the five member council on allied medical service of which the KSMA is a member.

4. The Council accepted the two recommendations of the Executive Committee that had been presented by the Committee on Rural Health. The first was that individual councilors planning district medical meetings during the coming year would provide five minutes on its program for representatives of the KSMA Committee on Rural Health to explain rural health activity and the second that each councilor appoint two physicians from his Councilor District to represent the district and attend the annual Kentucky Rural Health Conference.

5. Pathology Resolution: At the 1954 meeting of the House of Delegates a resolution was presented which has been known as the "Pathology Resolution." No action was taken by the '54 house except it did request that the Association study the matter further. At the first meeting of the Executive Committee and during the 1954-55 year, the resolution was referred to the Committee on Corporate Practice of Medicine. This committee studied the resolution and recommended its approval to the Executive Committee. The Executive Committee in turn recommended the approval of it to the Council. The Council accepted the recommendation of the Executive Committee. The resolution follows:

"WHEREAS, The American system of private practice of medicine has given us the highest health and medical standards in the world;

"WHEREAS, The AMA has publicly declared its stand in favor of this system of private practice; and

"WHEREAS, The practice of pathology including both clinical pathology and anatomic pathology has been regarded as the practice of medicine; and

"WHEREAS, In certain states, whose laws concerning the practice of medicine are similar to our own, the Attorneys General have officially interpreted the operation of laboratories, x-ray departments and anesthesia departments by corporations such as hospitals as illegal, and acceptance of salaries or commissions from such corporations by licensed practitioners of medicine as unethical fee splitting; and

"WHEREAS, As a result of this interpretation an attempt is being made by certain lay groups to cause revision of the law or its interpretation to permit division of pathology into professional and technical service, the former being personal labor of the pathologist and therefore being the practice of medicine, the latter being the work of the technical assistants, who perform under his direction and supervision, and therefore not the practice of medicine and legally practiced by a hospital; and

"WHEREAS, If this position should be sustained the practice of pathology and thus of all medicine would be in danger of being taken over piecemeal by non-medical personnel and corporations to the detriment of both patient and physicians; and

"WHEREAS, As early as 1943 the AMA studied this problem and stated that the 'House of Delegates of the AMA is opposed to the division of any branch of medical practice into so-called technical and professional factions,' and also that 'the practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of surgery, internal medicine, or any other designated field of medicine.'

"THEREFORE, BE IT RESOLVED that the House of Delegates of the Kentucky State Society of Medicine is opposed to the division of any branch of medical practice into so-called technical and professional factions and furthermore instructs its delegates to the AMA to maintain this position."

THE RADIOLOGY MATTER

The State Board of Health had referred to the Council a letter received from a KSMA member asking that certain issues concerning the practice of radiology in hospitals be clarified. The State Board of Health referred the matter to the Council. The Committee on Corporate Practice was asked by the Council to make recommendation and following study by that committee, it recommended to the Executive

Committee that the guide for conduct on radiologists and relationships with institutions published by the College of Radiology be accepted. The guide follows:

"The College suggests that all radiology departments should be on an accurate cost analysis basis, whereby all doctor expenses and indirect expenses of the hospital incident to the operation of the x-ray department are listed and deducted from the gross income and the money remaining after this represents net profit, and the College of Radiology recommends that all of this net profit should be the fee of the radiologist. In itemizing expenses of the department, they should include depreciation of equipment, rental of space insofar as heat, water, etc., all forms of insurance, Workman's Compensation, social security deduction, etc...relative to the billing of the patient, the College feels that it is perfectly permissable for hospitals to bill the patient but they should specify that this is the fee of the radiologist, and include the name of the radiologist..."

6. The Executive Committee accepted the Committee on Corporate Practice's recommendation and passed it on the Council with the recommendation that the Council approve it. After discussion, the Council accepted the Executive Committee recommendation.

7. The Executive Committe at its June 23 meeting named a small committee to study reference committee procedures with the view of allowing more time for reference committee deliberations. The report of the committee suggested that reference committees be authorized from 10:00 to 12:00 and 2:00 to 4:00 on Tuesday following the first meeting of the House of Delegates Monday night. Following discussion, the recommendation of the Executive Committee was tabled.

8. Invitation to Kentucky Chapter of American College of Surgeons: The desirability of having the American College of Surgeons participate in the specialty group programs during the Annual Session were discussed and the Council adopted a resolution which it authorized the president to present to the college inviting them to sponsor the surgical session during the afternoon of specialty group meetings at the 1956 session.

9. McDowell Committee: Dr. Underwood pointed out that the Headquarters Office would be grateful for the clarification of how funds should be spent in the operation of the McDowell House which were in the KSMA budget. It was stated that the Association appropriates $1500 and the Kentucky Surgical Society contributes $1000. The Council voted that all McDowell funds in the budget should be earmarked for the upkeep and maintenance of property. Thus was concluded the morning session of the Council.

10. Following lunch the Council met in the Conference Room of the State Department of Health with a number of deputy commissioners and division heads of the State Department. It was explained by Dr. Underwood that a greater understanding between the medical profession and the Kentucky State Department of Health was desirable. He said that the Department would like to discuss some of its problems in its relationship with the medical profession for the purpose of getting recommendations and guidance.

The following items were discussed:

(a) St. Joseph Hospital, Lexington, Kentucky.

The Council was asked whether or not it approved the granting of Hill-Burton Funds to the St. Joseph Hospital for a proposed diagnostic and treatment center facility. The Council had previously requested the Department to present such matters on an individual basis, to determine whether or not the corporate practice of medicine was involved. Following discussion, the Council approved the granting of funds.

(b) Prenatal Kahns:

The Council was asked whether or not it approved the following procedure when physicians fail to comply with the prenatal law:

1. The local health department should make every reasonable effort to get the physician to comply.
2. If the local health department fails, the State Department of Health should make every reasonable effort to gain compliance.
3. If the State Department of Health fails, the State Board of Health should make every reasonable effort to gain compliance.
4. If this procedure fails, the State Board of Health should prosecute the offending physician by every legal means to gain compliance.

Following discussion, the Council accepted the plan as outlined by Dr. Underwood.

The Council was then asked if it wanted the KSMA notified of the convictions, if any, that might be obtained. The Council indicated that the KSMA did not desire any such notices.

(c) Reporting of Occupational Health Diseases:

The Council was asked whether or not it favored the reporting of occupational health diseases. Following discussion, it was agreed by common consent that the reporting of occupational health diseases was desirable.

(d) Polio Vaccine:

J. Farra Van Meter, M. D., expressed the feeling of the Executive Committee of the Fayette County Society in this matter. The Committee had asked that he voice a very vigorous protest against using federal funds for purchase of polio vaccine. He said that the Fayette group considers this another endorsement of the federal underwriting of a form of medical practice that is not justified, and the group asked that the Association recommend that the state of Kentucky refuse the use of these funds for this purpose.

The pros and cons of accepting the federal funds were discussed.

W. W. Nicholson, M. D., chairman of the KSMA Polio Coordinating Committee, was unable to be present. His report was made for him by Doctor Underwood, who:

1. Read the letter of Richard Elliott, M. D., Lexington, disapproving the plan of using federal funds to purchase all the available polio vaccine. Dr. Elliott felt that purchases should be limited to the amount needed for medically indigent children;
2. Reported that the other two members of

the committee, W. W. Nicholson, M. D., Wyatt Norvell, M. D., were:

(a) Opposed to the plan in principle, but

(b) Felt that Kentucky should get her share of the available funds; therefore

(c) There was no other choice to make than to accept the federal funds.

Doctor Underwood explained that the plan to be followed, if approved by the Advisory Committee to the State Department of Health, was:

1. To buy all the available vaccine.
2. To distribute it to each county on the basis of child population involved.
3. To recommend that the local health department and physicians of each county handle the distribution and use in each county.

Following a full discussion the Council voted to approve this plan.

(e) **General Immunization Policy:**

The Council was requested to advise the Department concerning a minimum state wide immunization policy for local health departments. Dr. Underwood stated that the State Department of Health preferred that private physicians handle all preventive and curative medicine. Preferably local health departments should engage only in community medicine or public health, he said, and suggested that the following program be considered as a minimum:

1. In its news releases, the local health department would state that all who are able to pay should go to a private physician and all unable to pay could come to the local health department.
2. The local health department would not require any statement from a physician or any means test of any kind but would immunize all persons who came to the Department.

Following a discussion, the Council approved the above suggested minimum procedure.

It was agreed and understood:

1. That plans for immunizations should be developed locally between the medical society and the health department.
2. That it was preferable for the local physicians to assume leadership and do the entire job.
3. That the local health department had a responsibility to know that the immunization level of the community was safe and to do the immunizations to the extent that they were not done by private physicians.

After consideration of the above, the Council voted to urge that the KSMA, by letter to the secretary of each of its component societies, take the lead and cooperate in every way in the promotion and carrying out of the immunization program.

(f) **Preventive Medical Services Policy:**

The Council expressed its approval of the policy endorsed in Item e for other phases of preventive medicine.

In discussing curative medicine, the Council thought the policy set forth in Item e should also be followed, but that it should be limited to venereal diseases, tuberculosis and streptococcic infections of the throat.

(g) **Central Immunization File:**

The Council was told of the need for a central immunization file in all local health departments. By common consent, it was agreed that pilot projects to establish such a file on a voluntary basis be undertaken in selected counties.

(h) **Parental Consent for Immunizations:**

The Council was told the local health departments require the consent of the parents before immunizations are given. It was stated that this was not always written and that in some schools the problem is a difficult one. Sometimes there is simply a notice in the paper and other publicity to the effect that immunizations are to be given unless there is a request from the parents to the contrary. The Council received this matter as information.

(i) **Free Immunizing Agents:**

The possibility of Kentucky physicians receiving, at their request, free vaccine for immunizations, was presented. It was the general opinion of the Council members that if the vaccine were made available to the doctors without charge, more immunizations would be given.

The Council gave its approval to this proposal.

(j) **Compulsory Immunizations:**

The Council was asked whether or not there should be a law saying that every child should be immunized against typhoid, pertussis and tetanus. Following discussion concerning the relative merits of law versus health education, the Council accepted a motion that it approve the preparation of such a law, with the request that the Kentucky State Medical Association see a copy of the proposed law before further action is taken.

(k) **Ambulatory Treatment of Tuberculosis:**

The Council was told that there are 5,000 known cases of tuberculosis in Kentucky not in hospitals or under treatment. It was suggested that:

1. Funds be secured for the ambulatory treatment of tuberculosis;
2. Six clinics be established in addition to those in State Tuberculosis Hospitals;
3. The clinics be in charge of local chest physicians;
4. The program be administered by the State Department of Health.

P. M. Crawford, M.D., Director of the Division of Tuberculosis Control, and others discussed the program. After the discussion the Council agreed to go on record as approving the proposal that new clinics be established to provide ambulatory treatment for tuberculosis patients.

(l) **Cytological Laboratory for Cancer:**

Dr. Underwood presented to the group the possibility of obtaining federal funds for the establishment of an experimental cytological laboratory for the detection of cancer in this community. The benefits which could be derived from this experimental study were discussed and it was felt that every effort should be made to obtain this laboratory.

The Council voted to approve of this method of further investigating the means for diagnosing cancer and that an effort be made to obtain the equipment.

(m) **Relationship to Private Practice:**

The Council was asked how the State De-

partment of Health might improve its relationship with the private physician. It was pointed out that the work of the Department supplements the private physician's work and that if the principles and policies involved were clearly understood, there would be very little antagonism between the two groups. The Council then voted to request that the State Department of Health write a letter to be sent in the Secretary's Letter each month. It was felt that such a letter could give much valuable information to the physicians and that better relations would be engendered as a result of better understanding.

(n) **State Board of Health Regulations:**

The Council was asked whether or not it wanted its lawyer to have the opportunity to review all major Board of Health regulations prior to their adoption. By common consent, the Council agreed this procedure was desirable.

(o) **1% Silver Nitrate:**

The fact that some doctors are using various prophylactic solutions in the eyes of the newborn instead of the 1% silver nitrate, as required by law, was discussed. It was pointed out that no change has been made in this regulation because 1% silver nitrate is still the only agent favored by most national medical groups.

It was taken by consent that the Council advise the Health Department to keep such a regulation until the time when a change is indicated, and that the State Board of Health take steps to enforce the regulation.

(p) **State Department of Health Budget:**

Doctor Underwood asked if the Council would consider it worthwhile to go over a copy of the biennial budget request of the State Department of Health. This suggestion was discussed further, and by common consent it was decided to present the budget at a future meeting.

(q) **Fluoridation of Public Water Supplies:**

The progress made in the fluoridation of the public water supplies was reviewed. The Council, by common consent, voted to endorse the fluoridation of public water supplies. Doctor Underwood thanked the Council for the time spent in discussing the above matters, and for the suggestions and advice given.

11. **Legislative Committee**—The Council then elected Clyde C. Sparks, M.D., Ashland, as a member of the Legislative Committee and voted to authorize the Chairman of the Legislative Committee, Dr. Baughman, to appoint a co-chairman.

FIFTH MEETING: The meeting held on September 8 was opened with Dr. Baughman explaining that this was a special meeting of the Council of KSMA, called by the Vice-chairman in the temporary absence of the Chairman, for the purpose of re-opening the subject of the distribution of polio vaccine.

The views of each of the guest physicians of the Council concerning the distribution of the polio vaccine were heard in detail by members of the Council. The guests then retired and the Council went into session.

The members of the Council debated the various suggestions for distribution of the vaccine. Following a full discussion, in which the Chairman called on each member to express his views, the Council voted not to alter the decision it reached at its August 25 meeting.

After taking this action, it was decided that the matter should be referred to the House of Delegates at the 1955 Annual Session as a special action of the Council to be considered in executive session.

SIXTH MEETING: The Council met at 3:00 Monday, September 26, at the Brown Hotel, Louisville. Regular reports were made and accepted.

After a thorough discussion, by a unanimous vote of the Council, the State Department of Health was requested to hold up shipment of polio vaccine until action was taken by the House of Delegates.

Respectfully submitted,
Branham B. Baughman, M. D.
Chairman of the Council

COUNCIL RECOMMENDATIONS

The two recommendations of the Council to the House of Delegates, as considered by Reference Committee No. 1, were:

PATHOLOGY RESOLUTION

"The Council recommends that the House of Delegates act favorably on the 'Pathology Resolution,' given below. Additional information may be found under Fourth Meeting in the report of the Council:

"WHEREAS, The American system of private practice of medicine has given us the highest health and medical standards in the world;

"WHEREAS, The AMA has publicly declared its stand in favor of this system of private practice; and

"WHEREAS, The practice of pathology including both clinical pathology and anatomic pathology has been regarded as the practice of medicine; and

"WHEREAS, In certain states whose laws concerning the practice of medicine are similar to our own the Attorneys General have officially interpreted the operation of laboratories, x-ray departments and anesthesia departments by corporations such as hospitals, as illegal, and acceptance of salaries or commissions from such corporations by licensed practitioners of medicine as unethical fee splitting; and

"WHEREAS, As a result of this interpretation, an attempt is being made by certain lay groups to cause revision of the law or its interpretation to permit division of pathology into professional and technical service, the former being personal labor of the pathologist and therefore being the practice of medicine; the latter being the work of the technical assistants, who perform under his direction and supervision, and therefore not the practice of medicine and legally practiced by a hospital; and

WHEREAS, If this position should be sustained the practice of pathology and thus of all medicine would be in danger of being taken over piece-meal by non-medical personnnel and corporations to the detriment of both patient and physicians; and

"WHEREAS, As early as 1943 the AMA studied this problem and stated that the 'House of Delegates of the AMA is opposed to the division of any branch of medical practice into so-called technical and professional factions,' and also that, 'the practice of anesthesiology, pathology, physical medicine and radiology are an integral part of the practice of surgery, in-

ternal medicine, or any other designated field of medicine.

"THEREFORE, BE IT RESOLVED that the House of Delegates of the Kentucky State Medical Association is opposed to the division of any branch of medical practice into so-called technical and professional factions and furthermore instructs its delegates to the AMA to maintain this position."

DISTRIBUTION OF POLIO VACCINE IN KENTUCKY

"The Council recommends that the House of Delegates consider, in executive session, the problem of distribution of polio vaccine in Kentucky. This matter is discussed on page 27 of the report of the Council to the House of Delegates."

The report of the Council was discussed and also approved. There were certain sections of the Council Report which included supplemental reports pertaining to the question of the Salk Polio Vaccine. Reference Committee No. 1 met in conjunction with Reference Committee No. 4 and heard much discussion on this matter. Reference Committee No. 1 returned to its conference room and drafted the following statement of the Reference Committee:

Cognizant that the basic principle of free federal medical care is contrary to our belief but well aware that the protection of our people is paramount in our objective, we recommend that the section of this report of the Council be approved and would further add that our House of Delegates express their long range opposition to this plan specifically and instruct our delegates to the AMA, our Educational and Legislative Committee that our dedicated purpose be the repeal of Public Law 377 so that such unfortunate occurrences be not repeated.

Further in the report, the Council recommends that the House of Delegates act favorably on the Pathology Resolution. This recommendation was discussed and it is the recommendation of the Reference Committee that this be presented to the House of Delegates without comment.

Mr. Speaker, I recommend the adoption of the report of the Council with the amended portion added by the Reference Committee pertaining to the Salk Vaccine.

Motion was seconded and a thorough discussion followed.

It was moved and seconded that the motion be tabled and the motion carried.

It was moved that the House accept the recommendation of Reference Committee No.1, that the report of the Council be approved, with the exception that the matter regarding the Salk polio vaccine be acted on after hearing discussion on the related subject which was referred to Reference Committee No. 4. The motion was seconded and carried.

At this time, the President made the following motions concerning matters contained in his report to the House of Delegates:

Mr. Speaker, I move that the County Society Officers' Conference continue and that it be held in Executive Session.

The motion was seconded and carried.

Mr. Speaker, I move the House of Delegates request the legal enforcing agency of the Medical Practice Act to seek and secure an opinion from the Attorney General referrable to whether hospitals charging for services of radiologists, pathologists and other licensed practitioners is or is not the corporate practice of medicine.

The motion was seconded and carried.

Mr. Speaker, I move this House of Delegates direct the Council to form a basic policy referable to lay-sponsored health groups and movements and report its findings at the next Annual Meeting, sooner if possible.

The motion was seconded and carried.

Mr. Speaker, I move that the House of Delegates instruct the Medical Service Committee to study our major unsolved problems, placing them in positions of relative importance and reporting their findings to the Council. It is further moved that the Council be directed to bring to this House, in 1956, positive recommendations as to how these problems are to be solved and a goal to be reached in the next five or ten years.

The motion was seconded and carried.

Mr. Speaker, I move that a special committee of this House be appointed to study our committee and any other organizational structure problem it may consider proper, and report at the 1956 Annual Session.

The motion was seconded and carried.

Mr. Speaker, I move that the proposed amendment in the By-laws, Chapter VIII, Section 2, providing for a Committee on Arrangements, be amended to delete the Committee on Arrangements giving its responsibility to the Committee on Scientific Assembly, be referred to the Committee to study the Constitution and By-laws.

The motion was seconded and carried.

Mr. Speaker, I move that the Committee to Study the Constitution and By-laws consider the passage of permissive legislation allowing official enlargement of component units without loss of franchise.

The motion was seconded and carried.

REFERENCE COMMITTEE NO. 2

W. Vinson Pierce, M.D., Chairman

Reports on Medical Care, Medical Education, Hospitals and Related Subjects

Committee on Medical Service

This report dealt chiefly with the formation, processing and assembling of the Report on Indigent Medical Care in Kentucky. Mentioned in the report was consideration given to the desirability of making certain basic changes in the Blue Cross rules and regulations concerning office practice.

Reference Committee No. 2 wishes to commend the Committee on Medical Service for its very comprehensive report on indigent medical care and to express the appreciation of the members of the Kentucky State Medical Association for the great amount of work which the Committee expended in preparing this report.

The report has been so well publicized and its findings have been made so easily available to anyone concerned, that it will not be necessary for this Committee to summarize the findings at this time. It is the hope of this Reference Committee that the recommendations presented by the Committee on Medical Care may lead to legislative action by our state legislature, which will increase the funds available for indigent medical care.

It is of interest to note that the candidates for the office of governor have both expressed themselves as being in full approval of the recommended program.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Committee on Medical Service be adopted.

Medico-Legal Committee

It was pointed out in this report that a quiet year experienced by this Committee indicates that the quality of medical and surgical care in Kentucky has improved. The number of cases compromised continues to increase, while the number determined by court trial continues to decrease.

Reference Committee No. 2 has considered the report of the Medico-Legal Committee and we are pleased to note that the Medico-Legal Committee experienced a very quiet year. This seems to denote improvement in the quality of medical and surgical care in our state.

Our Reference Committee wishes to take this opportunity of thanking J. B. Lukins, M.D., for his long and faithful service as Chairman of the Medico-Legal Committee and for welcoming John Gordinier, M.D., as his successor.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and passed that the report of the Medico-Legal Committee be adopted.

American Medical Education Foundation Committee

The Committee reports that the chairman attended a meeting of the National Committee of the American Medical Education Foundation, in Chicago, in January. Several letters have been written soliciting funds for the Foundation, but individual giving in the past year does not exceed $300.

Reference Committee No. 2 has considered the report of the American Medical Education Foundation Committee. The Chairman states that he has written letters in regard to the Education Foundation Fund, and that the results have been discouraging. A complete report indicates that not over $300 has been raised this year. Money given to the Alumni Fund of the University of Louisville School of Medicine is considered part of this fund and will be in the neighborhood of $21,000.

The Reference Committee feels that this is a worthy matter and should be supported by all members of the KSMA. It is brought to the attention of the House of Delegates that many members are giving to the alumni funds of other medical schools rather than the University of Louisville and that Kentucky is receiving no credit for their gifts.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the American Medical Education be adopted.

Committee on Cerebral Palsy

The report deals with the operation of the United Cerebral Palsy of the Falls Cities and puts forth recommendations as to changes in the operation of this organization.

This report is concerned with the investigation of the Falls Cities United Cerebral Palsy chapter, and the recommendations apply to it specifically, but any decisions reached may be far reaching in their applications to other lay-sponsored groups. The Committee recommends:

(1) That they obtain a medical director who will be approved by the Jefferson County Medical Society of the KSMA. It is further recommended that such director be qualified in the specialty or that he be board certified, and that he be from the fields of one of the following; pediatrics, neuropsychiatry, orthopedics or neurosurgery, and that the UCP make available to him training in a UCP center.

(2) That the UCP make a formal statement of their budget system.

(3) That the UCP state its willingness to coordinate with other organizations to become more efficient.

(4) That the UCP of the Falls Cities survey the incidence of cerebral palsy patients, what the needs are for training them, and the ways

in which they feel that these needs shall be met. Included in the survey should be a statement of goals of the organization and the long range plan for the individual patient.

(5) When the above requirements have been met, the Committee recommends that the local UCP be recognized as an agency of Cerebral Palsy, and after receiving endorsement of the Jefferson County Medical Society, that it be endorsed by the KSMA.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Committee on Cerebral Palsy be adopted.

Diabetes Committee

This report told of the activities of the Committee during the 1954 State Fair and the outcome of the 1954 Diabetes Detection Drive.

The report of the Diabetes Committee shows that there has been an increased interest in Diabetes, both by the people and the physicians, in Kentucky during the past year. A total of 43,375 tests were done in the counties and at the State Fair, with 190 proven newly discovered diabetics. The service rendered by the radio, television and the press is greatly appreciated and we recognize the generosity of the Ames Company, of Elkhart, Indiana, in donating the Clinitest tablets used in doing the urine tests through the state.

The county Auxiliaries rendered a great aid in many counties.

Mr. Speaker, I move the adoption of this section of the report.

Motion seconded and carried that the report of the Diabetes Committee be adopted.

Committee on Hospitals

The Committee reports that it expects to hold a meeting in the near future, but at this time, it has nothing to report.

Reference Committee No. 2 has reviewed the report of the Committee on Hospitals and notes that the Committee has deferred its meeting until a later date this year and that it consequently has nothing to report.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Committee on Hospitals be adopted.

Dental Committee

The Committee reported that the relationship between the KSMA and the Dental profession is one in very good standing.

Reference Committee No. 2 has studied the report of the KSMA Dental Committee, and is pleased to note that there is evidence of improved relationship between the medical and dental professions, which is manifested in numerous ways.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Dental Committee be adopted.

Medical Education Committee

The Committee reports that little demand has been made upon it by the county societies for post-graduate education. It filled two requests for scientific programs in the past year.

No formal meetings of the Committee on Medical Education were held during the past year since no matters of sufficient importance were presented to justify calling a meeting. Each member of the Committee was contacted by letter with regard to the apparent lack of interest in the Association for the program established by the Committee.

Two requests for scientific programs came to the Committee during the year and were filled: one for the Fourth Councilor District meeting, Bardstown, on June 23, 1955; the other for the Fourteenth Councilor District meeting in Pikeville on September 22, 1955.

It is the opinion of the Committee on Medical Education that this phase of the Association's activity could best be served by the University of Louisville School of Medicine in an official alliance with the KSMA. It is also suggested that the Committee affiliate with, and send a member to, the Annual Meeting of the States' Medical Post-Graduate Association.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Medical Education Committee be adopted.

Committee on Nurse Training

No matters were referred to this Committee and therefore, no meetings were called. The Committee urged that every KSMA member encourage the training of registered and practical nurses.

Reference Committee No. 2 has reviewed the report of the Committee on Nurse Training and even though no problems were referred to this Committee, we urge that the medical profession continue to encourage and to assist in the program of training registered and practical nurses. It is particularly urged the medical profession assist in the recruitment program of the various nursing schools.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Committee on Nurse Training be adopted.

Medical School Advisory Committee

The Committee held two meetings during the year, one meeting called for the purpose of going over the applicants for the Medical School Class of 1955.

The Medical School Advisory Committee held two meetings during the past year. On September 19, 1954, the Committee met with Dean Murray Kinsman. At this meeting, Dr. Kinsman discussed the matter of getting out a circular, letter or pamphlet concerning the medical school, but due to the scarcity of faculty help, he has not yet been able to carry out this project. Other projects which Dean Kinsman discussed were the matters of sending faculty representatives to sectional state meetings and the matter of preceptorships for second and third year medical students during their summer vacations. The presentation of "Senior Day" to the Senior medical students was discussed and the plan approved.

On April 14, 1955, the Committee met with Doctor Kinsman at the Medical School to investigate the applicants for Medical School Class of 1955. At that time, 102 applicants had been accepted. Forty percent of the applicants for this year's class have Grade C standing in their college work.

The Advisory Committee reviewed the entire list of applicants and feels that the Admissions Committee of the Medical School had accepted every possible student from Kentucky who came within minimum requirements.

The Committee feels that we should encourage more young men and women to study medicine.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Medical School Advisory Committee be adopted.

School Health Committee

This report discussed the promotion of the use of school health record forms and the cooperation of the medical profession in making physical examinations of school children in compliance with the school children.

It is the opinion of Reference Committee No. 2 that the present School Health Record Form adopted by the State Department of Public Instruction, is adequate.

It is recommended that physical examinations of school children should be made where possible, in the office of the pupil's personal physician. In those communities where there is a scarcity of doctors, by the local option and desire of the physicians in those communities, these school examinations may be made by the Public Health Officer or personnel in that community.

It is our recommendation that the Committee on School Health should be authorized by the KSMA to take part in the formation of a Kentucky Health School Council to consist of representatives from the Kentucky State Dental Association, Kentucky State Department of Public Instruction, the Kentucky State Department of Health, the Kentucky Parent Teachers Association and the KSMA.

Mr. Speaker, I move the adoption of this section of the Report.

Motion was seconded and carried that the report of the School Health Committee be adopted.

Advisory Committee on Blood Banks

The Committee reported that one problem had arisen during the past year concerning the desirability of a county society endorsing a commercial blood bank operated and owned by individuals not holding the MD degree.

Reference Committee No. 2 has reviewed the report of the Advisory Committee on Blood Banks and endorses the action taken by the Jefferson County Medical Society and the Council in opposing the principle of the operation of a blood bank that is not under the control of, or run by, doctors of medicine.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Advisory Committee on Blood Banks be accepted.

Advisory Committee on General Practice

The Committee reported that no meetings have been held this year.

The Committee has nothing to report since there was no meeting called during the year.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Advisory Committee on General Practice be adopted.

Advisory Committee on Obstetrics

The Committee reported that no meetings have been held this year.

Reference Committee No. 2 notes that no formal meeting of this Committee was called during the year. It would seem that a Committee representing such an important branch of medicine should attempt to have at least one meeting a year. Rapid advances in all phases of medical

practice would seem to make this necessary in order to keep our Association completely abreast of the times.

The same comments would seem to be pertinent regarding the report of the Advisory Committee on General Practice.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Advisory Committee on Obstetrics be adopted.

Advisory Committee on Pediatrics

The Committee reported that no meetings have been held this year.

No meeting was held during the year. A meeting was proposed in April to discuss the Salk vaccine, but was not held due to the uncertain availability of the vaccine and the diversity of opinion at the national level.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Advisory Committee on Pediatrics be adopted.

Report of Medical Research Commission

The Committee reported the progress made as a result of the appropriation of $300,000 for the program.

Reference Committee No. 2 believes that the Commission has carried out its responsibility well to the extent that funds were available and, as you know, has entered into a contract to supply the University of Louisville School of Medicine $300,000 per year for research purposes. This grant has helped the school increase the size of each entering class by 25 students. Unfortunately, there have not been enough qualified applicants from Kentucky to fill the class this year, nor last year.

It is believed that the School could not continue to operate satisfactorily without this grant and that it could operate more satisfactorily if the grant were increased. It is hoped that the State Legislature will see fit to increase its annual appropriations to the Medical Research Commission.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Medical Research Commission be adopted.

Advisory Council to University of Louisville Medical School Student AMA Chapter

The Advisor reported that he had met with the Student Chapter three times.

The report of the Advisory Committee to the University of Louisville Student AMA Chapter shows that the Council conducted many successful activities during the past year, and that through its work it has brought the students into definite contact with the AMA. It was felt that these contacts will help the students to find out what the AMA will mean to them when they get out of school.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Advisory Council to University of Louisville Medical School Student AMA Chapter be adopted.

Mr. Speaker, I move the adoption of this report as a whole.

Motion was seconded and carried that the report of Reference Committee No. 2 be adopted as a whole.

REFERENCE COMMITTEE NO. 2

W. Vinson Pierce, M.D., Covington, Chairman
Richard G. Elliott, M.D., Lexington, Vice-chairman
John D. Handley, M. D., Hodgenville
Chris Jackson, M.D., Danville
H. B. Murray, M.D., West Liberty

REFERENCE COMMITTEE NO. 3

Richard J. Rust, M. D., Chairman
Reports on Legislation and Public Relations

Committee on Corporate Practice of Medicine

The report dealt with the limitations placed on the functions of this Committee due to the fact that there has been no clear-cut definition of the corporate practice of medicine.

Your Reference Committee agreed with the report of the Committee in their statement of the severe handicaps under which this Committee is operating due to a lack of a concise definition as to what constitutes corporate practice of medicine. It does not agree with the Committee's opinion that the State Attorney General should be asked to define this.

It is recommended by this Committee that the Council of the KSMA appoint a committee to (1) define completely and concisely what constitutes the corporate practice of medicine (2) obtain whatever legal help that may be necessary to formulate this definition (3) to correspond with appropriate committees of the AMA and with whatever other professional groups such as the Association of Clinical Pathologists, Kentucky State Radiologist Association as may be necessary to arrive at this definition (4) to report this definition in its entirety and in all of its ramifications to the Council and to the 1956 House of Delegates in order to allow

them to formulate the policy governing the corporate practice of medicine.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and discussion followed.

In order to clarify the Reference Committee's decision as to whether or not the Attorney General should be consulted as to his opinion on what constitutes the corporate practice of medicine, the Chairman stated that it was the Committee's intention to request that not only the Attorney General be asked, but that the Association formulate what it thinks is the corporate practice of medicine.

Following discussion, the motion carried, and the report of the Committee on the Corporate Practice of Medicine was approved.

Public Relations Committee

The Committee reports that it has had one meeting and several conferences during the past year. The report stated that an AMA Public Relations Manual was considered of sufficient importance by the Committee that it was made available to various County Society Officers and that in order to promote the Manual, the Committee authorized a display panel showing the features of the Manual to be set up at the County Society Officers' Conference in 1955.

Your Reference Committee recommends the acceptance of the report of this Committee with thanks for the work they have done in the past year.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Public Relations Committee be adopted.

Report of the Woman's Auxiliary

The Auxiliary reports a total membership of 991, including 64 members-at-large. This shows an increase of 69 members over last year's total. Mrs. Clark Bailey, Harlan, was elected Third Vice-president of the Auxiliary to the AMA, and the Kentucky State Auxiliary had 10 delegates (100% delegation) present at the National Convention. Other highlights of the year were included.

It is recommended by your Reference Committee that the report of the Woman's Auxiliary to the KSMA be received with thanks.

It is further recommended that the House of Delegates commend the Woman's Auxiliary in their diversified program and to encourage them in the continuation and extension of their excellent work.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Woman's Auxiliary be accepted.

Physicians Placement Committee

This report contained statistical information on activities of the Physicians Placement Service during the past Associational year. It further lists several actions taken by the Committee at its meeting.

It is the feeling of your Reference Committee that this report of the Physicians Placement Committee be accepted with thanks for the excellent work which they have accomplished in the past year.

It is felt that this House of Delegates should be informed specifically of the successful effort on the part of this Committee in placing ten physicians in the last year in various areas of Kentucky where these physicians were needed.

Mr. Speaker, I move the adoption of this section of the report.

Motion seconded and carried that the report of the Physicians Placement Committee be adopted.

Advisory Committee to United Mine Workers Welfare and Retirement Fund

It was reported that the past year has been a quiet one in the relationship between Kentucky physicians and the UMWA Welfare and Retirement Fund. This does not indicate that the problems do not still exist, but open and frank discussion of the problems by both organizations. Also included in the report were recommendations of the Committee and discussion on several recent policies adopted by the UMWA Welfare and Retirement Fund.

It is a recommendation of your Reference Committee that the House of Delegates accept this extensive report with thanks and that this committee be commended for the amount of time and effort which they have made in attempting to solve the numerous problems involved. It is further recommended that this House of Delegates instruct their delegates to the AMA to recommend the deletion of the term of Joint Commission on Accreditation of Hospitals from Section VI, Article C, of the report of the Council on Industrial Health and the Council on Medical Service of the AMA which presently reads, "The basic requirements established for all approved hospitals and outpatient departments according to the criteria of the Joint Commission for Accreditation of Hospitals, should apply to the medical staffs of agencies serving this field." Thereby making it read, "The basic requirements established for all approved hospitals and out-patient departments should apply to the medical staffs and agencies in this field" and it further rec-

ommends the rewriting of Section X, public and community relations of the same report to remove the ambiguity in this Section relative to the question of free choice of physicians.

It is further felt by this Committee that this House of Delegates reaffirm the recommendation of the President of this Association relative to this matter. Namely, "That this Association reaffirm its stand supporting the basic medical freedoms as it has done in the past." It is also recommended that active support be given any component unit which is trying to solve these problems locally.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Advisory Committee to the UMWA Welfare and Retirement Fund be adopted.

Legislative Committee

The Legislative Committee has contacted Kentucky's Senators and Representatives on several occasions during the past year concerning legislation before Congress. A small group of KSMA officers and others have met during the year with gubernatorial candidates to ascertain their respective attitudes toward a constructive program on health matters.

It is recommended by your Reference Committee that the report of this Committee be accepted with thanks for the effort which they have made in discharging their duties. We feel that certain clarifications of this report are needed.

We feel that this House of Delegates should be more adequately informed by this Committee relative to proposed medical legislation which will be introduced in subsequent meetings of the Kentucky General Assembly. Your Reference Committee fully realizes that it would be impractical for the Legislative Committee to fully inform this House on all legislation because frequently this is not known. However, certain medical legislation will be known and the House of Delegates should be fully informed prior to the meeting of the General Assembly so that they may discuss the pros and cons of such legislative material and to arrive at a conclusion as to which items to support or oppose.

It is therefore recommended that the Legislative Committee especially in the House of Delegates meeting just prior to the General Assembly should present both to the Council and to the House of Delegates, a list as complete as possible of all known medical legislation with their recommendation.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Legislative Committee be adopted.

Education Campaign Committee

The report mentioned some of the projects the Committee has undertaken in order to educate the members of the profession in the best means for preserving the good will of the public and to inform the members of the Association of the many services and benefits which the Association has to offer. Some of the projects are: News Capsules, P R Courses, Exhibits at KEA and the State Fair, Distribution of AMA Leaflets, "Senior Day" Program, AMA Radio Transcriptions and the Speakers' Kit on Veterans' Medical Care.

It is recommended by your Reference Committee that the report of the Education Campaign Committee be accepted. It is further recommended that profound thanks should be extended to this Committee for the excellent work which they have been doing.

In its professed aims to educate the members of our profession in the best means of preserving the good will of the public, to enlist the interests of all our physicians in the organized work of their state Association and its component societies, and to inform the members of the Association of the many benefits and services which their Association has to offer them, this Committee has nobly succeeded. The public relations courses for doctors' secretaries and office assistants have been enthusiastically received in all of the areas in which they have been given. Their exhibits at the Kentucky State Fair and at the Kentucky State Educational Association Convention have been well received.

The innovation of the "Senior Day" program this year met with such success that it was requested by the responsible University authorities that this program be continued each year. It is the recommendation of your Reference Committee that in this regard that at each "Senior Day" program, each county society be requested to send a delegate from their society to participate in this program.

Relative to the News Capsule which has long since proven its effectiveness as an educational medium for the profession, it is felt by your Reference Committee that an extension of this newsletter would be of decided benefit to the profession and to the functioning of the various committees of this Association.

It is suggested that the Education Campaign Committee consider the feasibility

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EDITORIALS

HR 7225 AND SOCIAL SECURITY

"A slow sort of country," said the Queen. "Now, here, you see, it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!"

—from "Through the Looking Glass and What Alice Found There."

Amidst the growing complexities of American government, especially as exhibited at the national level, it has become almost impossible for the people even to follow their extension into a wider and more intensive regimentation, let alone to know when and how they should act to protect their freedom as individuals.

The average person has neither the time nor the information to evaluate all of the little governmental streams which ultimately flow into a great river of control over the citizen. Fortunately, there are a few of us who at least can see the river. Unfortunately, there are many of us who, living on our own little tributary, do not realize the great flood threat that confronts us. New streams—some tiny, some substantial— are being added almost daily. The valley into which they flow has limits.

Among the streams, one that has caught the eyes of many persons, is the national social security system. A system that takes 2% out of each employed person's gross pay up to $4,200 per year and another 2% from his employer, is big business and big government.

If the US Senate concurs in the action of the House of Representatives and passes HR 7225, two things will happen. First, the amount of social security tax will rise sharply for each employed person (and self-employed person who participates). Second, the medical profession will be thrown right into the middle of the social security set-up.

The first should be of obvious concern to all of us as citizens. The second has an equally obvious special import for us as physicians. For this reason it becomes imperative that every physician familiarize himself with HR 7225.

It would be foolish to try and fully discuss either social security as a whole or special implications of HR 7225 in a brief editorial. Certain points, however, should be made clear.

HR 7225 is part of a pattern for extending the social security system to the point where the average employee's contribution will eventually rise from 2% to 4.5% of his gross pay. Add to this the increased employer contribution of 4.5%, and the total cost will be at least 9% of the average employee's gross earnings. This is more than many people now pay in income tax.

Whether this denial of the individual's right to spend 10% of his gross pay as he sees fit is justified by what he may receive in return is open to question. Certainly, however, it is of sufficient moment that every citizen should examine the question carefully. He should have available to him all the facts.

As it directly affects the medical profession, HR 7225 would provide for cash benefits to the permanently disabled over age 50 as a part of the social security system. On the medical profession will fall the responsibility for determining who is disabled and who is not.

Experience has shown that this will throw political pressure into the very heart of medical practice. Almost all physicians will have to make decisions as to whom should be declared permanently disabled. The subjective character of such decisions is obvious. Even the most conscientious politicians often will be unable to resist pressures from individual constituents. Political pressures in turn on the physicians will be inevitable. Remember, what would be involved in each instance would be CASH!

The question has been raised, too, will the age requirement stay at 50? May it not shortly drop to 45?—To 40?

Many persons who have carefully studied the problem have concluded that such a system, too, would interfere with advances being made in actual rehabilitation. They reason, with some justification, that the attraction of CASH would

Opinions expressed in contributions to this Journal are those of the writers and do not necessarily reflect the views of the Kentucky State Medical Association.

actually discourage persons from pursuing a course that would return them to society as active, useful citizens.

Others hold that while it would be nice to give disabled persons cash benefits, it is doubtful whether the individual or the nation would be served well if such benefits are accorded as a "right."

Whatever decisions are made on HR 7225, or the whole social security system, it is obvious that they will affect favorably or unfavorably the future of generations to come in America.

For this reason, a request has been made for a thorough study of the whole social security system. The American Medical Association urges that no further revision of the system be made until a study committee has a chance to make an exhaustive survey.

Such an approach makes good sense. It is important that each citizen has an opportunity to learn what actually is involved. A thorough-going would enable everyone to get the facts. Certainly the action of the House of Representatives in passing HR 7225 without public hearings should not be duplicated on such important issues. Careful study and wide publicity is in the interests of the people.

You, as a leader in your community, can do at least two things. You are urged to study carefully the material that the AMA will send you. You can also impress on others the wisdom of careful, open, full study of the whole social security system.

This is a big stream for medicine and for the people. Before we move into its deeper parts, let us study the currents carefully.

THE LIGHT WILL NOT FAIL

The Kentucky State Medical Association does a fine thing each year in selecting for the Distinguished Service Medal and the General Practitioner Award, two of its members. Those of us who attended this year's presentations to J. B. Lukins, M.D., of Louisville and Arcy O. Miller, M.D., of Scottsville were impressed by the dignity and sincerity attending this ceremony. Distinguished service to the people of our State and a significant contribution of their profession over a long period of years had won these men signal honors. In humility and gratitude they accepted the recognition which to them and their families and constituents crowned a long life of devoted service.

Not for professional prestige, nor for financial reward have these men worked. They have served their communities from year to year where need and opportunity presented and have discharged to the best of their ability those duties assigned them by their fellow physicians. Whenever called upon they have given without stint of their energy and skill to the relief of physical and mental suffering, which had endeared them to a great multitude of their neighbors. They have given of their time and strength to the indigent and have often gone the other mile with gifts of money to bring food, shelter and physical comfort to the aged and poor. They have contributed liberally, without remuneration, to the political, ethical and moral structure of their profession, which has elevated them in the esteem of their medical associates. They have actively participated in the program of the church, the lodge, the luncheon club, the political party, cultural organizations, schools and colleges. Wherever a hand was lifted toward the betterment and progress of the people, they have helped to strengthen it.

In almost every community in the State there are older physicians about whom the same could be said. There are many men in our profession who are equally as worthy but who have never received any recognition. The satisfaction of having lived up to the exacting standards expected of a physician must be their chief reward. There remains, however, the assurance that as they live and serve well their precept will be observed and their example followed by younger physicians. From the time of Hippocrates until today one generation has passed to the succeeding one The Lamp. The light has not grown so dim after all. Nor need we fear too much that it will fail in the hands of those to follow us.

Sam A. Overstreet, M. D.

ON THE ACCREDITATION OF HOSPITALS

There has been much discussion and considerable misunderstanding regarding the work of the Joint Commission on Accreditation of Hospitals. In June of 1955, the House of Delegates of the American Medical Association authorized the speaker to appoint a Committee "to review functions of the Joint Commission on Accreditation of Hospitals," and "to make an independent study or survey and report its findings and recommendations to the House of Delegates at the next Annual Meeting." The following men were appointed:

W. C. Stover, M.D., Chairman, Boonville, Indiana; John F. Burton, M.D., Oklahoma City, Oklahoma; Gerald D. Dorman, M.D., New York, N. Y.; George F. Gsell, M.D., Wichita, Kansas; Eugene F. Hoffman, M.D., Los Angeles, California; T. C. Terrell, M.D., Fort Worth, Texas; George Unfug, M.D., Pueblo, Colorado.

In a letter dated October 27, 1955, directed to the State Medical Association and component medical societies, this Committee has invited opinions, comments, criticism, and constructive suggestions regarding the accreditation of hospitals from all members of the medical profession. This is to be in their hands by January 15, 1956, so that it can be taken up for consideration at the next meeting of their Committee.

Specifically stated in this letter "the Committee is interested especially in the following: (1) The general understanding by physicians of the functions of the Joint Commission. (2) Whether the method of appeal from an adverse ruling regarding accreditation is satisfactory. (3) The effect on the individual physician's hospital connections due to actions of the Joint Commission. (4) Whether any organizations not now represented should have official representation on the Joint Commission. (5) The effect of the Joint Commission's requirements concerning such matters as staff meetings. (6) The pros and cons of separating administrative and professional accreditation functions in the inspection of hospitals. (7) Constructive suggestions for improving the hospital accreditation program."

Any comments from individual members of State and County Societies should be addressed to:

W. C. Stover, M. D., Chairman
Committee to Review Functions of
Joint Commission on Accreditation of
Hospitals, 535 North Dearborn Street,
Chicago 10, Illinois.

Sam A. Overstreet, M. D.

PRESIDENT'S ADDRESS

(Continued from page 1080)

beings, that we do not condone anything other than this, and that we place humanities above brilliancy, we will continue to progress. We realize that there are imperfections in our profession. We realize that there are imperfections in all professions. We know we are in a profession that is dedicated to service, that we shall continue to make every effort to alleviate human suffering, that we shall continue to care for the poor and afflicted, that we shall continue to work for study and research, that we shall continue to hope that patients may not be deprived of their freedom of choice of physician, that the fee for service system may be maintained in this country, but above all that we shall accept our responsibilities of leadership in health matters so that our profession can continue to be respected both as individual members and as a group organization.

A recent study made by the Hartford County (Connecticut) Medical Society, of 144 obituaries of local physicians and their probate court cases involving their estate, revealed some interesting facts. For instance one out of eight physicians who died between 1940 and 1953 was in debt at the time of death. Heart disease and cerebral hemorrhage were the chief causes of death. Doctors from 40 to 50 years of age died twice as fast as the general population. Doctors from 60 to 70 have a death rate 50% higher than the insurance table. One out of three physicians left no will, and only one doctor in eight survived his wife.

Immediate contribution to the American Medical Association Education Foundation for the nation's 81 medical schools is being stressed by the AMA. In the first nine months of 1954, $996,198.75 was collected. This year during the same period of time, only $540,343.33 has been collected. One hundred thousand of this amount came from an AMA grant.

ORGANIZATION SECTION

L. E. Read to Speak at RH Meet January 19 in Louisville

The 1956 Rural Health Conference will be held at the Kentucky Hotel in Louisville on Thursday, January 19, according to an announcement made by Wyatt Norvell, M. D., New Castle, Chairman of the KSMA Rural Health Committee. The one day affair is sponsored by the Kentucky Rural Health Council.

Leonard E. Read, President of the Foundation for Economic Education, Irvington-on-the-Hudson, N. Y., will be the luncheon speaker.

"Every physician and guest will benefit greatly by hearing this outstanding speaker," Dr. Norvell said.

Registration will be at 9:00 a.m., Jan. 19, and the meeting will adjourn at 4:00 p.m. Additional information concerning the Conference will be published in the January issue of the KSMA Journal.

Dr. Norvell has accepted an invitation to give the annual lecture sponsored by the Academy of General Practice at the Kansas State Medical Association Annual Meeting on April 30, 1956. He will speak on "A Young Doctor of the Old School."

AMA Seeking Opinions, Comments on SS Amendment, HR 7225

HR 7225, known as the Social Security Amendment of 1955, was discussed at an AMA Study Conference in Chicago, Oct. 22. More than 100 members of state medical associations, AMA officers and Board of Trustees members discussed approaches for getting the public's attention upon the AMA's viewpoint of the subject.

The bill, which provides for the payment of monthly cash benefits to the permanently and totally disabled at the age of 50, was passed by the House of Representatives last summer. It will come before the Senate Finance Committee for public hearings early in the next session of Congress.

All Kentucky Medical Society representatives who attended the conference are asked to send comments, suggestions and criticisms to the AMA Headquarters. George Lull, M. D., AMA Secretary and General Manager, said the AMA is studying the concensus of the representatives who attended the conference. The opinion or view of the majority will rule, he said.

American College of Surgeons Elect Kentuckian President

Daniel S. Elkin, M. D., native Kentuckian and former professor at Emory University, Atlanta, was elected president-elect of the American College of Surgeons at their Annual Meeting in Chicago.

The approximately 8,000 surgeons who attended the meeting were told by Warren Cole, M. D., new president of the college, that the emergency medical treatment for the injured is one of the great weaknesses in modern medical practice. Dr. Cole said surgeons in training, should spend more time studying care of the injured.

Dr. Elkin was professor of surgery and chairman of the surgery department at Emory for 23 years. He retired in 1953 to his boyhood farm near Lancaster.

Eleventh Councilor District Hears President Gaither

Gant Gaither, M. D., Hopkinsville, KSMA president, spoke at the annual dinner meeting of the Eleventh Councilor District Nov. 3, in the Daniel Boone Tavern at Berea. Dr. Gaither talked on "The Doctor's Dilemma."

Herbert Clay, M. D., Louisville internist, presented the evening's scientific program. He discussed "Neuro Circulatory Asthenia."

Sixty physicians and their wives attended the dinner meeting, according to Hugh Mahaffey, M. D., Richmond, Councilor from the Eleventh District. The Madison County Medical Society was the host group.

Joint Blood Council Establishes Washington Headquarters

The Joint Blood Council recently announced establishment of its national headquarters in Washington. Frank E. Wilson, M. D., former AMA Washington Office director, was named the executive vice president and secretary of the Council.

Participation in the group, which was formed by the American Association of Blood Banks, the American National Red Cross, the American Medical Association, the American Hospital Association and the American Society of Clinical Pathologists is completely volun-

tary. The organizations may withdraw from the program and other organizations can be admitted. The policies of the Council will be determined by a Board of Directors.

The group is principally concerned with the procuring, processing, preserving and distributing of blood and blood derivatives. Its objective is to coordinate all activities in this field. In time of national emergency or a disaster the council will set up blood banks and handle requests of the military forces for blood.

The officers of the Council are: Leonard W. Larson, M. D., Bismarck, N. D., president; Merlin L. Trumbill, M. D., Memphis, vice president; and Karl S. Klicka, M. D., Chicago, treasurer.

Bill VonderHaar Named President of Louisville Student AMA

William VonderHaar was elected president of the Louisville Chapter of the Student AMA at its first meeting of the school year in October. Mr. VonderHaar is a senior from Louisville.

Other officers elected at the meeting were: Robert Overstreet, Louisville junior; President-elect; Fred Smock Jr., Louisville sophomore; Secretary: and Ruby Arnsparger, Paris freshman; Treasurer.

Lt. Col. Eddy D. Palmer, Chief of the Gastroenterology Section, Walter Reed Army Hospital, will speak to the Louisville Chapter May 14, 1956, according to Mr. VonderHaar. His topic will be announced later.

A new membership program established by the student AMA was set up this year whereby freshmen pay five dollars in dues which covers the four years of medical school and internship year, plus the Student AMA Journal.

Also the National Office has set up an SAMA foundation to loan money to needy students. Under this plan a student can borrow $1500.00 per year at two percent interest for the first two years and a two percent increase every two years until a six percent interest is paid.

County Society Officers Meeting Scheduled for March 29

Plans for the sixth annual County Society Officers Conference, to be held Thursday, March 29 at the Phoenix Hotel in Lexington, are well under way according to Gant Gaither, M. D., KSMA President.

Among the nationally known speakers who will participate in the meeting is David Allman, M. D., Atlantic City, member of the AMA Board of Trustees and Chairman of the Legislative Committee. Other nationally recognized speakers will be announced in the January journal.

In making the announcement, Dr. Gaither said he was taking the opportunity to urge all county society officers to submit the names of the 1956 officers and committees at the earliest convenience in order that they may receive full information concerning the conference.

P. B. Hall, M.D., Takes Top Honors in KSMA Golf Tourney

Paul B. Hall, M. D., Paintsville, won the low gross to take top honors offered by the KSMA at the 1955 Golf Tournament held during the Annual Meeting, according to Clifton B. Follis, M. D., 1954-55 KSMA chairman.

The low gross senior trophy was won by T. J. Overstreet, M. D., Lexington, with a score of 83. Joseph Humpert, M. D., Covington won the handicap honors with a net score of 72. Dr. Humpert won by lot over McHenry Brewer, M. D., Louisville.

Dr. Follis said each of the three winners would receive a special trophy and would have their names engraved on the traveling trophy.

Daily prize winners were: C. G. Follis, M. D., score 83 low gross (Monday); Henry Moody, score 84 low gross and John Archer, M. D., score 74 net, handicap (Tuesday); R. A. Hamilton, M. D., score 90 low gross and E. L. Marion, M. D., score 74 net, handicap (Wednesday); and T. G. Forsee, M. D., score 88 low gross and McHenry Brewer, M.D., score 72 net, handicap (Thursday).

Plans for Louisville Buildings Again Under Discussion

Plans for the construction of a physicians building and a new Methodist-Evangelical Hospital are under discussion again in Louisville, according to published reports.

The president of a New York construction firm announced he would build a $2,000,000 six story building on the northwest corner of Floyd and Gray streets. He said the building should be completed by fall or winter of 1956.

The Jefferson County Medical Society polled its members to see where they think a new Methodist-Evangelical Hospital should be built. According to published reports federal aid of $2,000,000 has been promised if the hospital is built in the Medical Center area—near General, Childrens, and Jewish Hospitals,

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One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

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Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

---

1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.

2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

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where it would be a teaching hospital of the U of L Medical School. According to similar reports some physicians urge that the hospital be built on the old Claggett Hospital site, on the Louisville outskirts.

William Reeves, M. D., Honored by Fleming Countians

William Saunders Reeves, M. D., 90, "the Little Physician of Fleming County" was honored at "Dr. Reeves Day," at Flemingsburg Oct. 22.

The tiny Dr. Reeves who today weighs only 85 pounds, was born at Sunset on July 28, 1865. He was graduated from the University of Louisville School of Medicine and began practice at Wyoming in Bath County, where he practiced for 20 years. He moved to Fleming County 44 years ago.

Dr. Reeves, described by one newspaperman as the little man with the great big heart, has delivered more than 3,000 babies in his 64 years of practice. Last Aug. 9, a few days after his 90th birthday he delivered four of these in one day.

Federal Medical Spending Report Released by AMA Office

Uncle Sam puts up $15 of every $100 spent by the American people (publicly or privately) for health and medical purposes, from purchase of tooth paste to financing cancer research, according to the federal medical spending report for the 1956 fiscal year prepared and released by the AMA Washington Office.

The report shows that the Department of Health, Education and Welfare with a one third spending increase, becomes the third department to be spending more than half a billion dollars. The two other agencies, spending over a half billion dollars, are the Defense Department and the Veteran's Administration.

The $127,754,900 increase over last year in the HEW spending is explained by a sharp rise in construction funds for the Hill-Burton hospital, vocational rehabilitation, medical re-

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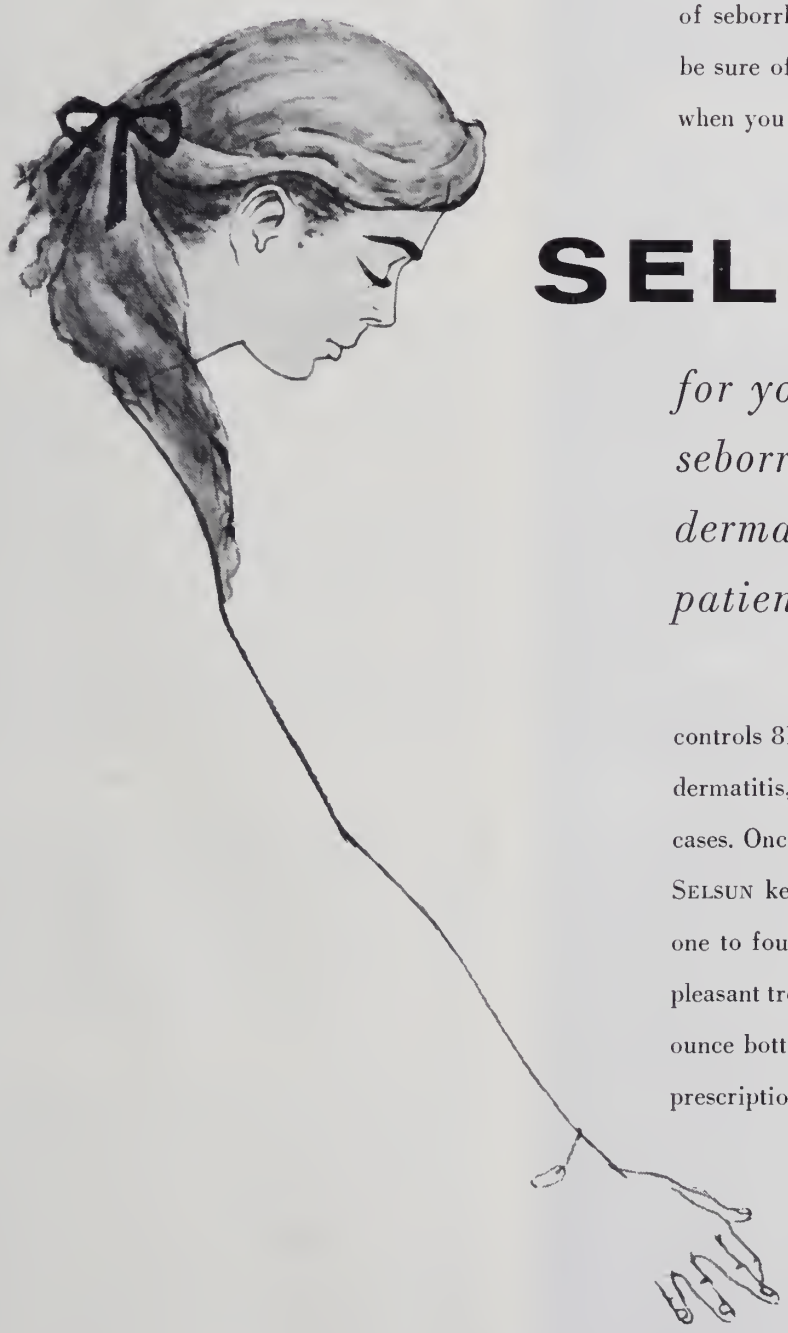

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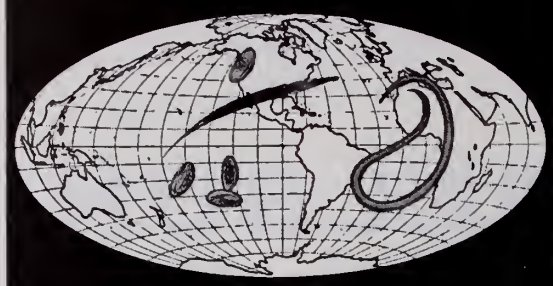

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search, medical care of the indigent, and by a $30 million appropriation to purchase Salk polio vaccine and finance inoculation campaigns.

Total federal health spending is expected to reach a new high this year of about $2,268,000. This is a 6.4% increase over last year.

This total federal health spending represents about 15 times the amount needed to maintain Congress and the federal courts, and four times more than is spent by either the Labor Department or the Post Office Department.

Medical Executives Conference Scheduled for Feb. 6-8

The first annual Medical Society Executives Conference is planned in Chicago at the Drake Hotel on Feb. 6-7-8.

A tentative program has been set up. Some of the subjects to be discussed by experts in the fields are the medical society executive and his job, the general organization and structure of organized medicine, financing and budgeting association activities and a study of personal qualifications and how to improve them.

A $10 registration fee will be charged.

Ky. Physicians Mutual, Inc. Meets

The Annual Meeting of the Members, Kentucky Physicians Mutual, Inc., was held Oct. 20, 1955. Mr. R. A. Dean, Sr., Chairman of the Proxy Committee presided.

B. B. Baughman, M.D., A. L. Cooper, M.D., Mr. R. A. Dean, Sr., J. B. Lukins, M.D., W. Vinson Pierce, M.D., Charles B. Stacy, M.D., Bruce Underwood, M.D., and R. W. Robertson, M.D., were re-elected directors. Their terms along with the term of J. G. Samuels, M.D., expired Oct. 20. W. K. Massie, M.D., was elected to replace Dr. Samuels.

Awards Committee Announced

Charles A. Vance, M.D., Lexington, Speaker of the House of Delegates, recently appointed five Kentucky physicians to serve on the KSMA Committee on Awards. These five will select the recipients of the Distinguished Service Award and the Outstanding General Practitioner Award which will be awarded at the 1956 Annual Meeting.

Ernest Strode, M.D., Lexington, was named chairman of the committee. The other members are: Hugh P. Adkins, M.D., Louisville; Joseph H. Kurre, M.D., Owensboro; Frank K. Sewell, M.D., Mt. Sterling; and Charles R. Yancey, M.D., Hopkinsville.

TB Commission Asks for 200 Beds

The State Tuberculosis Hospital Commission recently asked the State for money to add 40 beds each to five hospitals—at London, Glasgow, Paris, Ashland and Madisonville. These new beds would cost approximately $404,000.

The request, approved by the State Tuberculosis Co-ordinating Council, headed by E. M. Josey, Frankfort, secretary of the Kentucky Pharmaceutical Association, will be reviewed by the state budget makers and other state agencies. It will be passed to the new governor and final action will be taken by the 1956 General Assembly.

Ky. Nurses Meet in Louisville

The 49th meeting of the "Kentucky Nurses Week" held in cooperation with the National Nurses Week, was held October 18, 19, and 20 in Louisville at the Kentucky Hotel. Miss Joy McCuddy, director of nurses at Cardinal Hill in Lexington, will serve again in 1956 as president of the organization.

According to Miss Cynthia Warren, Louisville, executive secretary of the organization, the following officers were elected: Sister M. Evarista, director of the School of Nursing at St. Elizabeth Hospital in Covington, vice president; and Miss Louise Schoo, of St. Elizabeth Hospital in Covington, secretary. Miss Helen Brown, assistant director of the Frontier Nursing Service and Mrs. Ruth Thompson, Louisville private duty nurse, were named directors of the organization.

New Orleans Meet Begins Feb. 27

The nineteenth annual meeting of the New Orleans Graduate Medical Assembly will be held Feb. 27, 28, 29 and March 1 at the Municipal Auditorium. Eighteen physicians will participate in the program.

The New Orleans Graduate Medical Assembly's 1956 Post Clinical Tour to the West Indies and Central America will begin March 2. For more information about the tour write: The New Orleans Graduate Medical Assembly, 1430 Tulane Avenue, Room 103; New Orleans, La.

Florida Seminar Begins Jan. 16

The tenth annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Souci Hotel in Miami Beach the week of Jan. 16th, 1956. All registrants at the Seminar may attend the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology meeting on Wednesday of the same week. Registrants and their wives may also attend the informal banquet Wednesday night.

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Bumbalo, T. S., Gustina, F. J., and Oleksiak, R. E.: J. Pediat. 44:386, 1954.

White, R. H. R., and Standen, O. D.: Brit. M. J. 2:755, 1953.

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Brown, H. W.: J. Pediat. 45:419, 1954.

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Committee Changes Announced

Gant Gaither, M.D., president of the KSMA, has announced two recent appointments to KSMA committees.

Garnett J. Sweeney, M.D., Liberty is the new chairman of the Committee on Medical Education. He succeeds Lawrence T. Minish, Jr., M.D., Louisville.

Clyde C. Sparks, M.D., Ashland, past president of the KSMA, has been appointed to the Committee on Corporate Practice of Medicine.

AMA Announces Appointment

Glen R. Shepherd, M. D., Kansas City, has been appointed assistant secretary of the Council on Medical Education and Hospitals according to a report from the AMA. Dr. Shepherd, a faculty member of the University of Kansas Medical School, will manage the Council's activities in the area of post graduate medical education.

Dr. Mullen Heads Chest Physicians

A. B. Mullen, M.D., medical director of Waverly Hills Tuberculosis Sanatorium, was elected president of the Kentucky Chapter, American College of Chest Physicians at their session during the KSMA Annual Meeting.

Otis Shelton, Outwood, was elected vice president and J. Ray Bryant, Louisville, secretary-treasurer.

Dr. T. H. Alphin is AMA Director

Thomas H. Alphin, M.D., became the director of the American Medical Association, Washington Office, November 1, according to a notice in an AMA Washington letter.

Dr. Alphin, former deputy director, succeeded Frank E. Wilson, M.D., who left the AMA post to become executive vice president and secretary of the newly created Joint Blood Council. Dr. Alphin was an assistant director of the Washington Office, in 1953-54.

As the holidays grow near, we wish to express our appreciation for the business you have given us during this past year and the hope that you have found our services satisfactory.

May you all have a very Merry Christmas and a prosperous New Year.

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Dr. Godstein is KPA President

Joe Godstein, M.D., Louisville, was elected president of the Kentucky Psychiatric Association at its meeting in Louisville during the KSMA Annual Session.

Other officers elected at the KPA meeting were: John Bell, M.D., Louisville, vice president, and Charles Feuss, M.D., Lexington, secretary-treasurer.

MD's Elected to Pediatric Group

E. H. Christopherson, M.D., executive secretary of the American Academy of Pediatrics, announced that three Kentucky physicians were elected to the academy on Sept. 28, 1955. The physicians are: John Edmund Bickel, M.D., Owensboro; William Ries Gabbert, M.D., Owensboro; and Hubert Rex Holland, M. D., Paducah.

Dr. Becknell is New KAGP Officer

W. E. Becknell, M.D., Manchester, was recently elected secretary treasurer of the Kentucky Association of General Practice. The position was formerly held by D. G. Miller, M.D., Morgantown.

Sigma Xi Has Meeting at U of L

The Sigma Xi Chapter of the University of Louisville in cooperation with the Kentucky Heart Association and the Louisville Heart Association, held a panel discussion entitled, "Human Plumbing," at a meeting Oct. 21, on the U of L campus. Ten U of L professors took part in the discussion concerning arterial and heart diseases.

New Members of the KSMA

The following physicians were recently added to the KSMA membership roster:

R. W. Augustine, M.D., Madisonville
Zollman Kommor, M.D., Louisville
Aaron Marcum, M.D., Louisville
P. M. Temples, M.D., Madisonville
Charles A. Wolkoff, M.D., Louisville.

Dr. Rowntree Receives Citation

Gradie R. Rowntree, M.D., Louisville, was presented the Citation for Outstanding Service by the President's Committee on Employment of the Physically Handicapped. This citation makes Dr. Rowntree Kentucky's nominee to receive the National award from the National Committee on Employment of the Physically Handicapped.

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HENRY GRUENER, M.D. *Resident Physician*
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PROCEEDING OF HOUSE OF DELEGATES

(Continued from page 1103)

of using this News Capsules as a source of information to all of the members of the Association in such matters as pending legislation, both national and state, abstracting of important and pertinent items of such publications as the Washington News Letter, request for dissemination of information by the various committees of the State Medical Association and pertinent actions by the AMA, etc.

Mr. Speaker, I move the adoption of this section of the report.

Motion was seconded and carried that the report of the Education Campaign Committee be adopted.

Mr. Speaker, I move the adoption of this report as a whole.

Motion was seconded and carried that the report of Reference Committee No. 3 be adopted.

REFERENCE COMMITTEE NO. 3
Richard J. Rust, M.D., Newport, Chairman
Charles H. Maguire, M.D., Louisville, Vice-chairman
Carl Fortune, M.D., Lexington
Donald L. Graves, M.D., Frenchburg
Ralph D. Lynn, M.D., Elkton

(Continued in the January Issue)

News Items

Abraham Rosenstein, M. D., 1950 graduate of the Chicago Medical School, has joined in practice with **Leonard Singerman, M. D.,** Louisville. Dr. Rosenstein recently completed 24 months of service in the navy.

John Watts, M. D., radiologist, recently joined the staff of the Graves-Gilbert Clinic in Bowling Green. A 1951 graduate of the University of Louisville Medical School, Dr. Watts served his internship in Lexington at the Good Samaritan Hospital, and his radiology residency at the Veteran's Administration Hospital in Louisville.

Waller H. Griffing, M. D., radiologist, has joined the staff of the City-County Hospital in Bowling Green. A 1939 graduate of the Vanderbilt University School of Medicine, he interned at Christ Hospital in Cincinnati. He served a three year residency in radiology at Cincinnati General Hospital. Dr. Griffing was certified in 1943 by the American Board of Radiology. He is a member of the Radiological Society of North America, the American, Southern and Kentucky Medical Associations, the Kentucky Radiological Society and the Ameri-

can College of Radiology. Before going to Bowling Green, Dr. Griffing was associate radiologist at Lexington Clinic and later a member of the Middlesboro Hospital and Clinic staff in Middlesboro.

Robert Bryant Jasper, M. D., a 1941 graduate of the University of Louisville Medical School, has begun practice in Somerset. Dr. Jasper served a residency in surgery at the Norton Infirmary and Baptist Hospital in Louisville. He recently returned from service in the army.

L. E. Jordan, Jr., M. D., announced recently that he has returned to Henderson, and has reopened his office for internal medicine and general practice in the Vaughn Clinic Building. A 1944 graduate of Northwestern University Medical School, Dr. Jordan practiced at the Vaughn Clinic from 1948 to 1954 before entering the armed service.

The organization of a newly formed Committee on Geriatrics of the AMA's Council on Medical Service was announced recently in an AMA release. The group will hold an organizational meeting in Boston following the Clinical Session.

COUNTY SOCIETY REPORTS

CALLOWAY

The regular monthly meeting of the Calloway County Medical Society was called to order by C. H. Jones, M. D., Sept. 6, 1955.

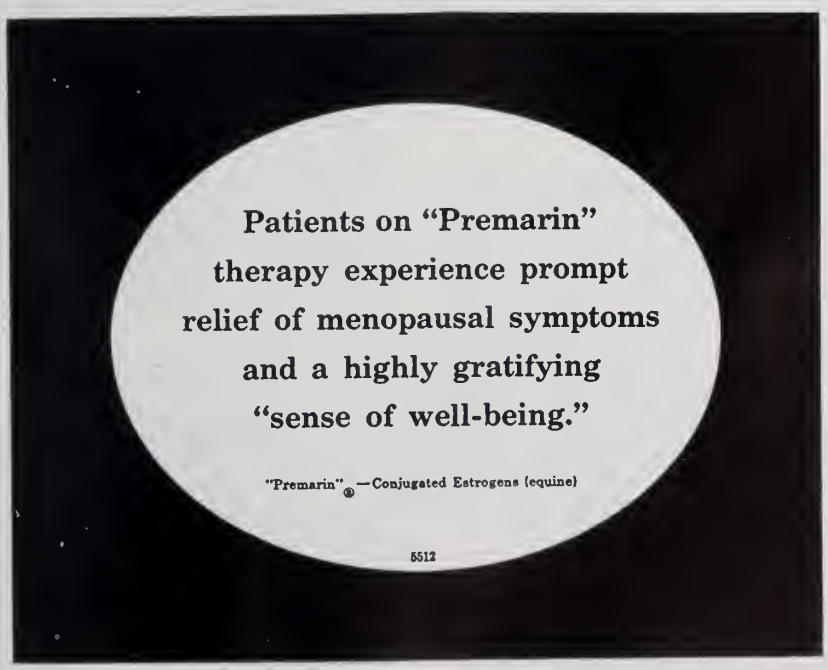
The group voted to allocate to the doctors 90% of the Salk Polio Vaccine, which will be issued for distribution, to children from one to nine, and give the remaining 10% to the Calloway County Health office to be issued to indigent patients. The group agreed to ask the County Judge to decide who the indigent patients are.

Present at the meeting were the following physicians: A. D. Butterworth, M. D., Charles Clark, M. D., Robert Hahs, M. D., Hugh Houston, M. D., C. H. Jones, M. D., C. C. Lowry, M. D., J. A. Outland, M. D., Charles Tuttle, M. D., and Harry U. Whayne, M. D.

C. H. Jones, M. D., President

McCRACKEN

Marion F. Beard, M. D., professor of hematology at the University of Louisville, gave a talk on Blood Transfusions and Transfusion Reactions at the last regular monthly meeting of the McCracken County Medical Society, September 21, 1955.



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NASHVILLE :—: TENNESSEE

A discussion of the polio vaccine policy was held by members of the local Health Department, members of the Board of Health and the County Society. It was decided to suggest that the Blue Shield Plan include payment for pathology service.

Walter R. Johnson, M. D., Secretary

PIKE

The Pike County Medical Society met at a called meeting on Sept. 23, 1955. Twenty doctors held a lengthy discussion of the articles of incorporation, constitution and by-laws of the society.

Orville Zeller, M.D., made a motion that the Pike County Medical Society accept the articles of incorporation, constitution and by-laws presented by the committee composed of W. C. Hamley, M.D., B. W. Cassady, M.D., and G. N. Combs, M.D., and that the committee be empowered to obtain the legal charter from the State of Kentucky. The motion was seconded and approved.

G. N. Combs, M.D., Secretary.

SCOTT

The regular monthly meeting of the Scott County Medical Society was held Thursday, Oct. 6, at the John Graves Ford Memorial Hospital in Georgetown.

H. G. Wells, M. D., gave a report on the KSMA Annual Meeting. It was decided that the Scott County Medical Society recommend to the Joint Polio Committee of the Scott County Board of Health and the Scott County Medical Society that all polio vaccine, under the Federal fore grant, would be distributed evenly between Scott County physicians who wish to give the vaccine. It was agreed that Scott county physicians would charge $2.00 for each shot.

F. W. Wilt, M. D., C. R. Lewis, M. D., and H. G. Wells, M. D., were appointed to a committee to recommend certain changes in the KSMA rules and regulations.

H. V. Johnson, M. D., Secretary

SHELBY-OLDHAM

Ralph Denham, M. D., Louisville, gave a talk entitled, "Disease of the Heart" at the September meeting of the Shelby-Oldham County Medical Society in Simpsonville. The delegate to the Annual Meeting was instructed to approve the plans of the School Health Committee, support Dr. B. B. Baughman for Councilor of this district, consult with doctors of their county about voting on free polio vaccine, and vote not to censure the council's vote on approval of plan to give free polio vaccine provided by recently enacted Congressional Legislation.

C. C. Risk, D.D.S., Secretary

In Memoriam

SOLOMON B. CASEBOLT, M. D.

Pikeville

1886-1955

Dr. Casebolt died August 3 in Pikeville after a brief illness. He was 69.

A native of Shelby Creek, Dr. Casebolt was graduated from the University of Louisville in 1911. He first practiced medicine at a first aid hospital during the construction of a railroad through the breaks of the mountains. Later he was physician and surgeon for the Rock Castle Lumber Company in Martin County. In 1921 he returned to Pikeville where he spent the rest of his life.

Dr. Casebolt was a member of the Methodist Church and the Masonic Lodge.

JOHN SIMPSON McGINNIS, M. D.

Lexington

1887-1955

Dr. McGinnis, 68, died August 16 at a hospital where he had been a patient since suffering burns August 7.

Dr. McGinnis, a Lexington physician and surgeon for 43 years, retired last December.

He attended the University of Louisville Medical School, and in 1912 was appointed to St. Joseph's Hospital staff. Dr. McGinnis was a World War I veteran.

LAWRENCE NEWTON TODD, M. D.

Berry

1890-1955

Dr. Todd, 65, a physician at Berry for 40 years, died July 29, 1955 at his home of a heart attack.

Dr. Todd began practice in 1912 at Sunrise.

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Later he came to Berry and for a time had a partnership practice with G. H. Ross, M.D., of Stamping Ground. He served as captain in the Medical Corps during World War I.

WILLIAM WALLACE MARTIN, M. D.

Sturgis

1875-1955

Dr. Martin, a native of Pickneyville, was fatally injured when struck by a car August 29, 1955, in Sturgis.

Dr. Martin, a graduate of the Louisville College of Medicine, began practice in Pride. He was resident physician for the Klondike Mines in Crittenden until they closed, then he went to Illinois. In 1950 he returned to Sturgis.

M. E. HOGE, M. D.

Jackson

1879-1955

Dr. Hoge, a physician in Eastern Kentucky for more than 53 years, died at his home after a long illness, September 8, 1955.

A graduate of the University of Louisville Medical School, he came to Jackson in the 1920's and was one of the founders of the Jackson City Hospital.

Dr. Hodge, before coming to Jackson, was company physician to two lumber companies.

JOHN THOMAS DAVIS, M. D.

Lexington

1879—1955

Dr. Davis died in Lexington at the age of 76, following a long illness. Until his retirement 14 months before his death he was a practicing physician in Louisville.

Dr. Davis graduated from the Hospital College of Medicine in Louisville in 1907.

EDMOND DANIEL TURNER

Cave City

1874-1955

Dr. Turner, 81, died Sept. 10, at the Clinic Hospital in Glasgow.

A practitioner for 49 years, Dr. Turner served twice as president of the Barren County Medical Society. He was a member of the Cave City Methodist Church, where he had served as Sunday School superintendent for 33 years, and of the Cave City Lodge of Masons.

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Journal of the

KENTUCKY STATE MEDICAL ASSOCIATION

Edited by

Bruce Underwood, M. D.

Under Supervision of the Council

Volume Fifty-Three

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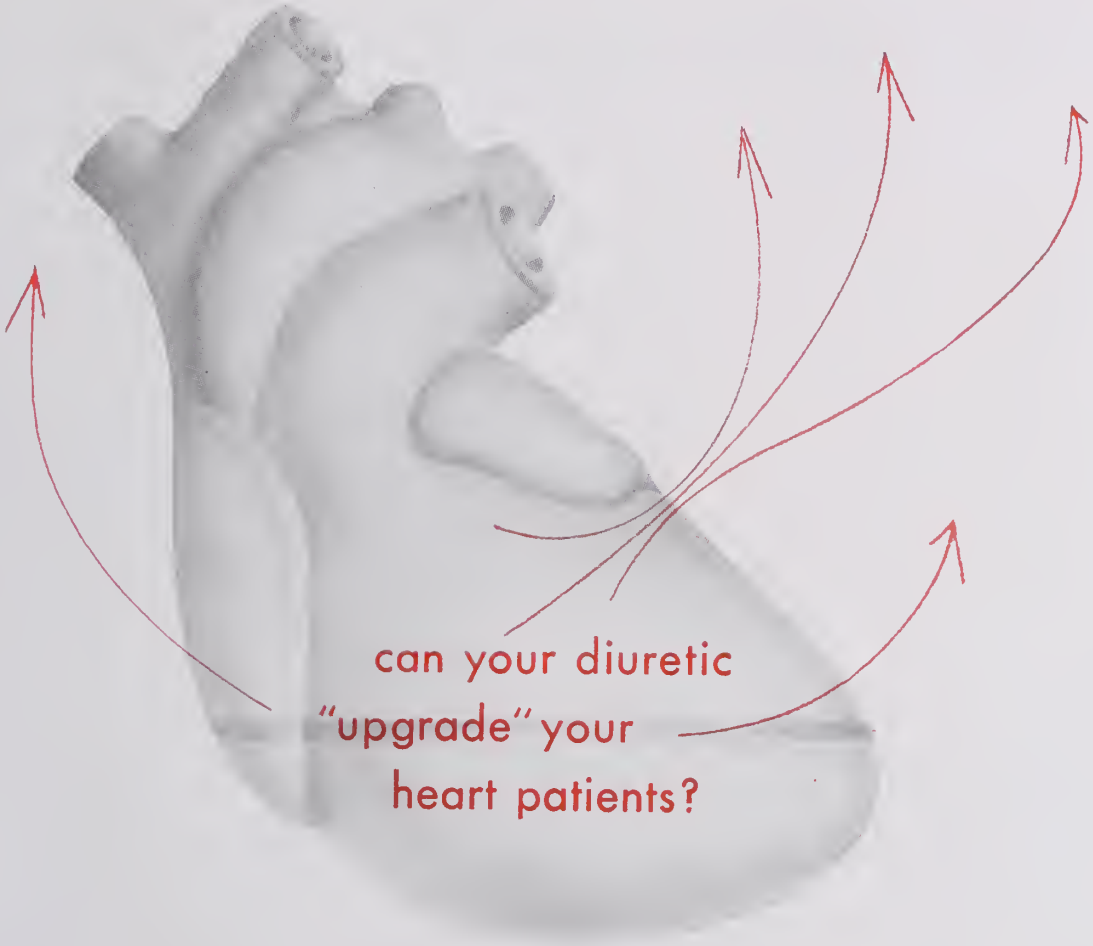

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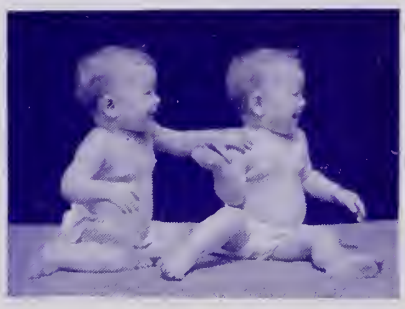

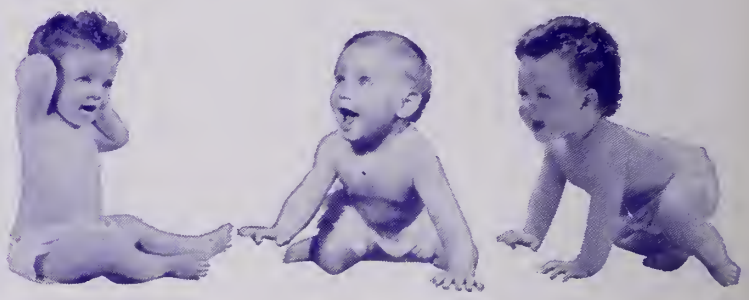

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